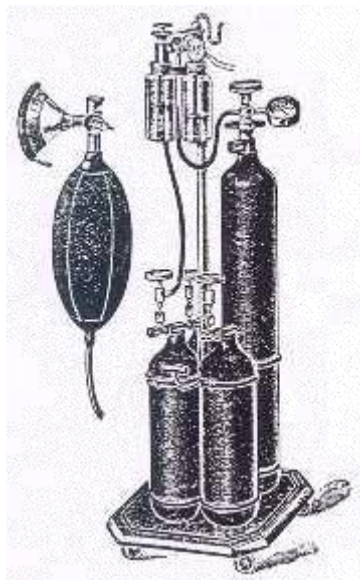


ANESTHESIA HISTORY CALENDAR

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April 2014



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This calendar includes a small selection of items related to the history of anesthesia, pain and pain management, and critical care medicine. Suggestions for additions, corrections, etc. can be sent to A.J. Wright at wrightaj21@gmail.com This resource was added to the [Librarians' Internet Index](#) in August, 2006; the LII is now a part of the Internet Public Library at <http://www.ipl.org/> An earlier version can be found on the web site of the Anesthesia History Association at <http://ahahq.org/Calendar/Calendar.php>

This modest effort is dedicated to the memory of Patrick Sim, M.L.S., a friend, colleague and mentor for many years.

NOTES:

Many items in this calendar were found in Pasquale Accardo's *The Medical Almanac*. Humana Press, 1992

Great Britain's History of Anaesthesia Society has a timeline at <http://www.histansoc.org.uk/Timeline.html>

"Anesthesia's Great Awakenings" by Betty J. Bamforth, M.D., was published in the *Anesthesia History Association Newsletter* 8(1):14-15, January 1990

An extensive "A Chronology of Events Relating to Anesthesiology and Allied Subjects" can be found in Keys TE. *The History of Surgical Anesthesia*. Huntington , New York : Krieger, 1978 [rep. 1945 ed.], pp 103-125

A "Calendar of interesting and important events in the history of medicine and anaesthesia" can be found in Bushman GB, Davies NJH, Atkinson RS. *A Short History of Anaesthesia: The First 150 Years*. Butterworth-Heinemann, 1996, pp. 180-200

John S. Lundy's *Clinical Anesthesia* [1942] has an appendix with a chronological listing of important events in anesthesia history from 4000 B.C. to 1941 A.D.

The chapter "History of Neural Blockade and Pain Management" by David L. Brown and B. Raymond Fink in Cousins MJ, et al, eds. *Neural Blockade in Clinical Anesthesia and Management of Pain* 3rd ed 1998 pp 3-32 contains five chronologies: "Ideas Concerning Pain and Neural Blockade," "Local Anesthesia," "Local Anesthetic Agents," "Individual Neural Blockade Techniques," and "Study of Complications of Neural Blockade"

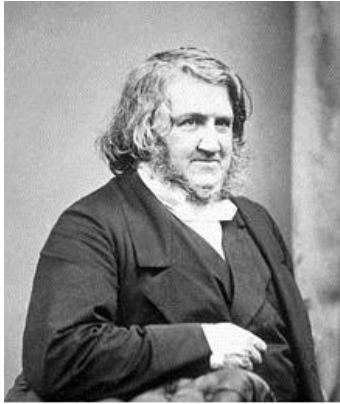
"The Chronology of Events in the History of Nitrous Oxide" is available in Heironimus TW. History of Nitrous Oxide. In: Nitrous Oxide, Eastwood DW, ed. *Clinical Anesthesia*, volume 1, 1964, pp 2-8

The AANA's "Through the Years in Nurse Anesthesia History" is available at <http://tinyurl.com/3frn57>

For medical history, see *A Chronology of Medicine and Related Sciences* by Leslie T. Morton and Robert J. Moore, Ashgate, 1997 and *The Timetables of Medicine: An Illustrated Chronology of the History of Medicine from Prehistory to Present Times* by John Cule and Roy Porter, Leventhal, 2000

Today in Health History [from Aetna] is available
at <http://www.intelihealth.com/IH/ih/IH/WSIHW000/333/7087.htm>

Illustrations are taken from Wikipedia unless otherwise noted. I have written all entries unless otherwise noted.

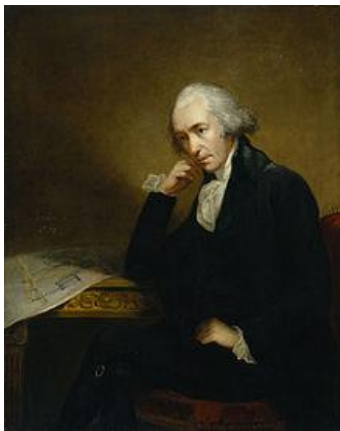


JY Simpson

James Young Simpson
1811-1870

THIS MONTH IN ANESTHESIA HISTORY: JANUARY

1736 January 19: James Watt was born. Watt, of workable steam engine fame, developed a partnership in the mid-1780s with Thomas Beddoes as Beddoes attempted to market his therapeutic applications of Priestley's "factitious airs" or gases. Watt developed equipment for Beddoes' use; some of this equipment was later used in Bristol during the nitrous oxide experiments of 1799 and 1800. Watt, his wife, and one of his sons, James Jr., participated along with numerous others in those experiments.



James Watt

1779 January 18: Peter Mark Roget was born in London, England. After graduation from medical school in Edinburgh, Roget spent 1799 in Bristol working with Thomas Beddoes and Humphry Davy on their famous nitrous oxide research. Roget later wrote the Encyclopedia Britannica entry on Beddoes and near the end of his life created the thesaurus for which he is

so well known [the first edition was published in 1852]. A prolific author, Roget also invented an improved slide rule used until the development of pocket calculators, and the pocket chessboard. He did research on vision physiology which he published in 1825 that is the conceptual basis for motion pictures. Roget died on September 17, 1869. [For more information, see Wright AJ. Peter Mark Roget and the Bristol nitrous oxide experiments. *Bull Anesthesia History* 19(3): 16-19, July 2001]



Peter Mark Roget

1809 January 19: American writer Edgar Allen Poe was born. Lesser-known among his works are three tales dealing with mesmerism, or what we now know as hypnotism. Mesmerism was developed in the late eighteenth-century by Viennese physician Franz Anton Mesmer [1734-1816] and for decades was associated with quackery. However, several physicians in the 1830s and 1840s in England and India used and promoted it as surgical pain relief until the introduction of ether by Morton. Poe's stories featuring mesmerism are "A Tale of the Ragged Mountains," "The Facts in the Case of M. Valdemar" and "Mesmerism Revelation." One recent history of mesmerism is Alison Winter's *Mesmerized: Powers of Mind in Victorian Britain* [1998]. Poe died in Baltimore on October 7, 1849.

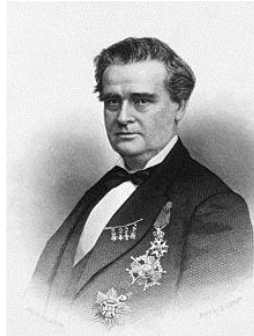


Edgar Allen Poe

1813 January 21: James Marion Sims, an Alabama surgeon famous for his vesicovaginal operation while practicing in Montgomery, Alabama, was born. After Morton's October, 1846, public demonstration of ether anesthesia in Boston, Sims urged Georgia physician Crawford

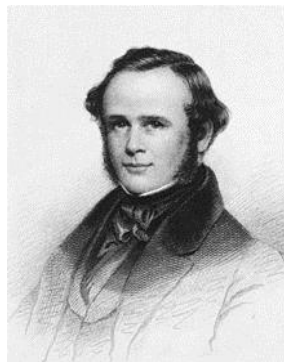
Long to publish an account of operations using ether that Long had performed in 1842. Long's account finally appeared in the December, 1849, issue of the *Southern Medical and Surgical Journal*. Sims was born in South Carolina and received his M.D.

from Jefferson Medical College in Philadelphia in 1835. For some years he practiced in Montgomery, but in 1853 moved to New York where two years later he opened the world's first hospital for women. He served a term as President of the American Medical Association and died on November 13, 1883. For more information about Sims, see <http://www.whonamedit.com/doctor.cfm/2013.html>



James Marion Sims, M.D. [1813-1883]

1815 January 21: Horace Wells was born in Hartford, Vermont. He died January 24, 1848.



Horace Wells [1815-1848]

1842 January: In Rochester, New York, William E. Clarke administered ether on a towel to a Miss Hobbie, who then had a tooth removed by dentist Elijah Pope. Clarke was a medical student home during a break; the lady was a sister of a classmate. One of Clarke's professors, E.M. Moore, discouraged him from further experimentation. This event is the first use of ether in dentistry, and is one of several instances where the idea or use of pain-relieving anesthesia appeared before Morton's 1846 use of surgical ether in Boston. Other include Davy in 1799 [nitrous oxide], Long in 1842 [ether] and Wells in 1845 [nitrous oxide].

1842 January 11: American psychologist and philosopher William James was born in New York City. Among his many other accomplishments, James self-experimented with nitrous oxide inhalation and left a brief but vivid description of his experience, "The Subjective Effects of Nitrous Oxide," originally published in the journal *Mind* in 1882. James was also a long-time supporter of Benjamin Paul Blood, another self-experimenter with anesthetic gases who described his philosophy in *The Anaesthetic Revelation* [1874] and other works. James, brother of authors Henry James and Alice James, died in 1910.

1845 January 20[approx.]: Horace Wells attempted to demonstrate the anesthetic properties of nitrous oxide, often identified as having done so at Massachusetts General Hospital. The anesthetic was incomplete and the demonstration considered a failure. That standard account of location is challenged in Haridas RP. Horace wells' demonstration of nitrous oxide in Boston. *Anesthesiology*. 2013 Nov;119(5):1014-22

1847 January 12: Joseph-Francois Malgaigne described his use of ether as an anesthetic in several cases to the French Academy of Medicine. Six days later the famous surgeon Alfred-Armand-Louis-Marie Velpeau describes his experiences with ether anesthesia, not all favorable, to the French Academy of Science.

1847 January 19: In Edinburgh James Young Simpson first used ether for relief of childbirth pain.

1847 January 25: The first Caesarean section under general anesthesia was performed at St. Bartholomew's Hospital, London, just five weeks after James Robinson's first anesthetic administrations in that city. The surgeon was Mr. Skey and the anaesthetist Mr. Tracy. The child survived but the mother, who was only four feet tall and had a grossly deformed pelvis, died two days after the operation. [*Lancet* 1:139-140, 1847]

1847 January 28: John Snow began to administer ether for major surgeries at St. George's Hospital in London.

1848 January 28: A patient in Newcastle, England, named Hannah Greener became the first fatality under chloroform anesthesia. [See Duncum BM. *The Development of Inhalation Anaesthesia*. 1947. Rep. London: Royal Society of Medicine Press, 1994, pp195-203]

1862 January 10: Samuel Colt died. In the 1830s Colt, calling himself "Professor Coult" or "Doctor Coult" of "Calcutta, London and New York", toured the eastern United States giving demonstrations of nitrous oxide inhalation to raise money to put his revolver prototype into production. In 1835 he patented a revolving-breech pistol and founded the Patent Arms Company in Paterson, New Jersey. The company failed in 1842, but an order for 1,000 revolvers by the U.S. government five years later during the Mexican War allowed Colt to restart his business. Colt was born in Hartford, Connecticut, on July 10, 1814. The text of an advertisement

for Colt's nitrous oxide demonstration in Portland, Maine, on October 13, 1832, can be found in Smith, *Under the Influence: A History of Nitrous Oxide and Oxygen Anaesthesia* [pp 37-38].



Samuel Colt [1814-1862]

1862 January 24: Novelist Edith Wharton was born in New York City. Among her numerous novels is *Twilight Sleep* [1927], a satirical portrait of the wealthy during the Jazz Age of the 1920s. The novel includes scenes of the administration of scopolamine for pain relief during childbirth, a popular method of the day called "twilight sleep." Wharton died in France on August 11, 1937.

1886 January 1: Wealthy grocer Thomas Edwin Bartlett died in the Pimlico district of London from chloroform poisoning. In the spring his wife Adelaide and their spiritual advisor, friend and her lover, Wesleyan minister Reverend George Dyson, were tried and found innocent of the crime. The crime and trial become a spectacular event in London. English author Julian Symons' 1980 novel *Sweet Adelaide* is based on the case. [See also Farrell M. Adelaide Bartlett and the Pimlico mystery. *Br Med J* 309:1720-1723, 1994; and Clarke K. *The Pimlico Murder: The Strange Case of Adelaide Bartlett* (London, 1990)].



Adelaide Bartlett

1913 January 18: American actor and comedian Danny Kaye was born in Brooklyn , New York . One of Kaye's best known roles is in *The Secret Life of Walter Mitty*, a 1947 film based on a short story by James Thurber. Kaye plays the title character, a meek little man who has elaborate daydreams of greatness. In one of those fantasies, Mitty imagines himself as a surgeon who in the middle of an operation must use a fountain pen to repair the malfunctioning anesthesia machine. Kaye died in Los Angeles on March 3, 1987.

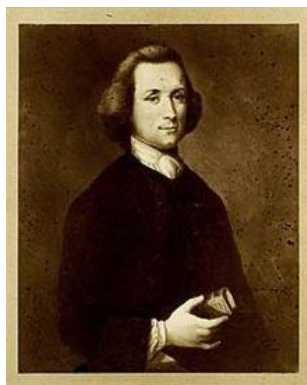


Danny Kaye

1923 January 21: A Clark gas apparatus was used by Dr. Arno B. Luckhardt to administer an ethylene-oxygen mixture to J.B. Carter, a medical student. This event was the first use of ethylene analgesia in a human. They repeat the experiment later the same day with Dr. Luckhardt and Mr. Carter exchanging roles. Since 1918 Luckhardt and R.C. Thompson had extensively studied the anesthetic and analgesic properties of an 80/20 mixture of ethylene and oxygen in animals. Their work had been stimulated by the 1908 experiments of botanists William Crocker and Lee Irving Knight on the effects of ethylene on carnations. Ethylene had been known for more than a century; in the late 1700s Joseph Priestley attributed its first preparation to Jan Ingenhousz, a Dutch botanist and physiologist. In 1849 British surgeon Thomas Nunneley investigated the gas, but did not recommend it as an anesthetic. In May 1923 Luckhardt and Carter reported on 106 cases of ethylene as a general anesthetic. Ethylene continued in use clinically for some three decades, despite several explosions associated with its administration. In recent years ethylene has been suggested as the agent responsible for the exalted states associated with the ancient Oracle of Delphi. . [See, for instance, Foster J, Lehoux D. The Delphic Oracle and the ethylene-intoxication process. *Clin Toxicol* (Phila) 45(1): 85-89, 2007]

1942 January 23: Canadian anaesthetist Dr. Harold Griffith introduced curare into anesthetic practice. [See Gillies D, Wynands JE. Harold Randall Griffith. The pioneer of the use of muscle relaxants in anaesthesia. *Br J Anaesth* 58:943-945, 1986 and Bodman R, Gillies D. *Harold Griffith: The Evolution of Modern Anaesthesia* (1992)]

1965 Jan 4: Poet T.S. Eliot died. His creation in “The Love Song of J. Alfred Prufrock” compared the evening to a “patient etherized upon a table.”



Joseph Priestley ca. 1763

THIS MONTH IN ANESTHESIA HISTORY: FEBRUARY

1723 February 25: Christopher Wren died in London. Around 1660 the English architect and astronomer began to experiment with the transfusion of blood between animals and intravenous injections into animals. An account of his work was published in the *Philosophical Transactions* of the Royal Society of London in 1665. [see Bergman NA. Early intravenous anesthesia: an eyewitness account. *Anesthesiology* 72:185-186, 1990] Recent biographies of Wren include Lisa Jardine's *On a Grand Scale: The Outstanding Life of Christopher Wren* and Adrian Tinniswood's *His Invention So Fertile: A Life of Christopher Wren*.

1804 February 6: Joseph Priestley died in Northumberland, Pennsylvania. Among many other achievements, this English Unitarian minister and scientist isolated nitrous oxide. In 1774 Priestley wrote about his research on gases, "I cannot help flattering myself that, in time, very great medicinal use will be made of the application of these different kinds of airs..." [Priestley J. *Experiments and Observations on Different Kinds of Airs*. 6 vols. 1:228, 1774] Priestley was born on March 24, 1733, near Leeds, England. For many years he was a member of the Lunar Society, a loose organization made up of scientists and industrialists such as James Watt and Josiah Wedgewood. Many of these men later supported the research by Dr. Thomas Beddoes and Humphry Davy on nitrous oxide and other gases. Priestley was a supporter of the American Revolution and considered by many a heretic; on July 14, 1791, his home in Birmingham was burned by a pro-Royalist mob. His laboratory, large library and unpublished manuscripts were destroyed. In April, 1794, Priestley and his wife sailed to America. You can learn more about him at <http://www.historyguide.org/intellect/priestley.html>

1807 February 27: American poet Henry Wadsworth Longfellow was born in Portland, Maine. On April 7, 1847, physician/dentist Nathan Cooley Keep administered the first obstetric anesthetic in the United States in Cambridge, Massachusetts. Dr. Keep was a prominent physician of the Boston area and the first Dean of Dentistry at Harvard. The patient was Frances Appleton Longfellow, second wife of Henry Wadsworth Longfellow. In his journal entry for April 1, the famed poet and scholar had noted, "Went to town the first time for several weeks and had a conversation with Dr. Keep about the sulphuric ether and its use." Under ether anesthesia, Fanny did not lose consciousness but felt no pain during the birth of her child. She later wrote about her experience, "I am very sorry you all thought me so rash and naughty in trying the ether. Henry's faith gave me courage...I feel proud to be the pioneer to lessen suffering for poor, weak womankind. This is certainly the greatest blessing of this age and I am glad to have lived at the time of its coming and in the country which gives it to the world..." [See Clark RB. [Fanny Longfellow and Nathan Keep](#). ASA Newsletter 61(9), September 1997]



Henry Wadsworth Longfellow, his wife Frances Appleton Longfellow, with sons Charles and Ernest. Circa 1849. From the collection at the Longfellow National Historic Site, Cambridge, MA. Copyright Easter National Park and Monument Association

1814 February 7: Gardner Quincy Colton was born in Georgia, Vermont. Colton introduced nitrous oxide to Horace Wells, among other achievements.

1824 February 21: Englishman Henry Hill Hickman wrote a letter to T.A. Knight describing his experiments with painless surgery on animals using carbon dioxide as an anesthetic.

1829 February 15: Silas Weir Mitchell was born. This American surgeon, neurologist, novelist and poet explored the relationship between pain and the weather and eye strain to headaches. Mitchell died on January 4, 1914.

1836 February 25: A patent was granted to Samuel Colt for his revolving pistol. In the 1830s Colt, calling himself "Professor Coult" or "Doctor Coult" of "Calcutta, London and New York",

toured the eastern United States giving demonstrations of nitrous oxide inhalation to raise money to put his revolver prototype into production. In 1836 he patented a revolving-breech pistol and founded the Patent Arms Company in Paterson, New Jersey. The company failed in 1842, but an order for 1,000 revolvers by the U.S. government five years later during the Mexican War allowed Colt to restart his business. Colt was born in Hartford, Connecticut, on July 10, 1814 and died on January 10, 1862. The text of an advertisement for Colt's nitrous oxide demonstration in Portland, Maine, on October 13, 1832, can be found in Smith, *Under the Influence: A History of Nitrous Oxide and Oxygen Anaesthesia* [pp 37-38].

1848 February 2: The Mexican-American War ended with the signing of the Treaty of Guadalupe Hidalgo. The first major battle of the U.S. war with Mexico was fought at Palo Alto, Texas, on May 8, 1846. Ether anesthesia was first used in a military conflict in this war, sometime in the spring of 1847 under the direction of American surgeons Edward H. Barton and John B. Porter. [See Aldrete JA, Marron GM, Wright AJ. The first administration of anesthesia in military surgery: on occasion of the Mexican-American War. *Anesthesiology* 61:585-588, 1984] The Library of Congress offers an excellent list of resources on this conflict at <http://www.loc.gov/rr/program/bib/mexicanwar/>

1873 February 1: First documented death from nitrous oxide inhalation in Great Britain was reported in this issue of *Lancet*, "Fatal Suffocation from Nitrous Oxide Gas." 1: 178-179. The February 15 issue also has an article about the case.

1874 February 16: Pierre-Cyprien Ore [1828-1891] reported to the French Academy of Sciences a case in which he administered the first intravenous general anesthesia in humans. "Ore was very enthusiastic about intravenous anesthesia with chloral hydrate, and believed it to be superior to inhalation anesthesia with ether or chloroform." [Keys, *The History of Surgical Anesthesia*, p. 57] Two years earlier he had published a preliminary report on the technique. In 1875 he published the first monograph on the technique, *Etudes Cliniques sur L'Anesthesie Chirurgicale par La Methode des Injections de Chloral dans Les Veines*. Acceptance of the method was delayed by slow recovery and high mortality.

1878 February 10: Claude Bernard, French physiologist, died. Bernard's classic work, *Lectures on Anesthetics and on Asphyxia* [1875], is available from the Wood Library-Museum of Anesthesiology in a fine translation by B. Raymond Fink, MD, published in 1989.

1884 February 26: Scottish physician Alexander Wood died. Wood introduced the hypodermic syringe for drug administration.

1908 February 22: A.D. Waller described his chloroform balance at a meeting of the Physiological Society in London. This apparatus was the first to give a continuous and almost instantaneous reading of the concentration of vapor received by the patient.

1909 February 20: Congress passed the first U.S. law prohibiting the manufacture and sale of opium. Opium had been used for centuries to relieve pain, but by 1900 an estimated 200,000 people in the U.S. were addicted to opium and its derivatives such as laudanum, paregoric and morphine.

1936 February 13: American Society of Anesthetists was founded. In a letter from Paul Wood to John Lundy, dated February 14, Wood noted, "I was reminded at the meeting last night which approved the change in title from New York to American Society of Anesthetists..." This letter is in the Collected Papers of John Lundy, Mayo Foundation Archive in Rochester, Minnesota. In a few years another name change would create the current name. The ASA can trace its history back to the Long Island Society of Anesthetists founded in the very early 20th century. A history of the ASA is Bacon DR, McGoldrick KE, Lema MJ, eds. *The American Society of Anesthesiologists: A Century of Challenges and Progress* [Wood Library-Museum, 2005].

1938 February: The American Medical Association approved affiliation of the new Am Board of Anesthesiology with the Board of Surgery. ABA became independent in 1941.

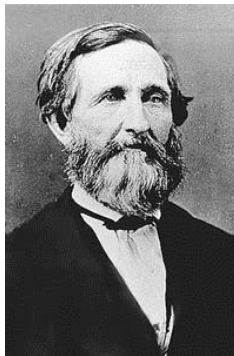
1941 February 16: The American Board of Anesthesiology achieved independent status.

1943 February 13: Sir Robert Macintosh published an article in *Lancet* about the laryngoscope blade that now bears his name. [Macintosh RR. A new laryngoscope. *Lancet* 1:205, February 13, 1943]

1969 February 2: British actor Boris Karloff died at age 81. Although perhaps best known for two roles, as "The Monster" in *Frankenstein* (1932) and the title character in *The Mummy* (1932), Karloff acted in dozens of films between his start in 1916 in silent films and his death. In one of the films made toward the end of his career, *Corridors of Blood* (1958), he plays Dr. Thomas Bolton, a physician in the early Victorian era who is determined to find a drug that will obliterate pain during surgery. As he tells the other hospital physicians who mock his efforts, "Operations without pain are possible, and I'll not rest until I prove it to you." Like some of the historical figures in early anesthesia history, Bolton experiments on himself as he searches for the right dosage and becomes addicted.

2014 February 8: Dr. Michael A. Denborough of Australia died. In April 1960 a 21-year-old male patient appeared at Royal Melbourne Hospital with a compound leg fracture. His mother accompanied him and told doctors that 10 of their relatives had died under ether anesthesia. The anesthesia team of Jim Villiers and Pat Maplestone decided to try halothane, but the patient immediately became hyperthermic. The halothane was stopped and the patient packed in ice; he survived. The next day R.R.H. Lovell, head of the Department of Medicine, asked Denborough to see him because of his interest in genetics. Denborough's investigation identified a genetic abnormality in the family. The two men published a letter in *Lancet* about the case in 1960; two years later Denborough and his colleagues published an article in the *British Journal of Anaesthesia* describing malignant hyperthermia for the first time. Less than a

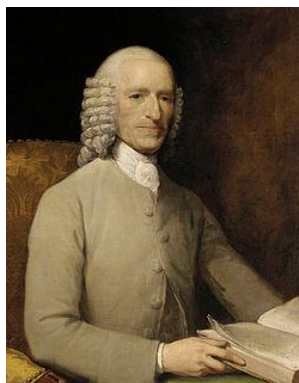
year later the patient reappeared in the hospital and was given an uneventful spinal anesthetic. Denborough's 1986 description of these events can be found at <http://garfield.library.upenn.edu/classics1986/A1986E581000001.pdf> Later in his career Denborough worked with pigs to develop the porcine model of MH.



Crawford Long, M.D.

THIS MONTH IN ANESTHESIA HISTORY: MARCH

1712 March 8: English physician John Fothergill was born in Wensleydale, Yorkshire. Among many other accomplishments, this devout Quaker was the first to accurately describe migraines, and recognized that hardening of the arteries could cause chest pain. In 1744 he published an account of mouth-to-mouth resuscitation to revive the apparently dead. Fothergill was also the first to recognize the symptoms of diphtheria and maintained an extensive botanical garden near Stratford which contained plants from all over the world. He died in London on December 26, 1780.



John Fothergill, M.D. as painted by Gilbert Stuart

1733 March 13: Joseph Priestley was born in England. Among numerous other achievements as a Unitarian minister, author, and chemist, Priestley isolated nitrous oxide in the 1770s. Because of his support of the French and American revolutions, Priestley's home and laboratory were burned in the Birmingham Riots of July, 1791. In 1794 Priestley sailed for America and settled in Pennsylvania. He died on February 6, 1804, and was buried in Riverview Cemetery in Northumberland. Two recent books about Priestley are Isabel Rivers and David L. Wykes, *Joseph Priestley, Scientist, Philosopher, and Theologian* [2008], and Steven Johnson, *The Invention of Air* [2008].



Joseph Priestley by Ellen Sharples, 1794

1750 March 20: Dutch chemist Martinus van Marum was born. From about 1790 to 1808 Van Marum was an active member of the Society of Dutch Chemists which studied gases--including nitrous oxide--and published some 35 papers based on that research. He is best known for the electrostatic machines he built and the discovery of ozone produced by electrical sparks. Van Marum died in Haarlem on December 26, 1837. For more information, see

Defalque RJ, Wright AJ. The Society of Dutch Chemists (1790-1808): It's Contribution to Anesthesia. *Anesthesiology* 91(3A):A1157, 1999.



Martinus van Marum by Charles Howard Hodges

1753 March 26: Benjamin Thompson, Count Rumford, was born in Massachusetts. During his life Thompson was an inventor, spy, government official, diplomat, physicist and philanthropist. Over a number of years he studied and wrote about gunpowder. Thompson was the first to propose what turned out to be the correct idea, that heat is a form of motion, not an invisible liquid known in his day as "caloric." He invented a photometer, calorimeter, and a new oil lamp. During the Revolution he spied on Americans for the British and naturally moved to England after the war. He was eventually knighted and later made a count. In 1800 he helped found the famed Royal Institution in London and hired a young Humphry Davy to become a lecturer in chemistry there. In March 1801 Davy left Bristol, where he had been experimenting with nitrous oxide and other gases at Thomas Beddoes' Pneumatic Medical Institution. For a year or two after moving to London, Davy continued to demonstrate the effects of nitrous oxide inhalation at the Royal Institution. The great English satiric artist James Gillray portrayed such a demonstration in one of his most famous works; both Davy and Rumford are caricatured in the scene. Count Rumford died in 1814, aged 61. You can learn more about Rumford at <http://www.rumford.com/Rumford.html>



Benjamin Thompson, Count Rumford

1815 March 5: German physician Franz Mesmer died at Lake Constance in what is now Germany. Mesmer, who was born on May 23, 1734, received his medical degree from the University of Vienna in 1766. Mesmer developed a therapy that he called "animal magnetism" that supposedly used the influence of heavenly bodies on health. His techniques of suggestion were later developed by James Braid (1795-1860) into what we know as hypnotism. Although "Mesmerism" was used for surgical pain relief, especially in England and among the British in India, prior to the introduction of anesthesia in the late 1840s, it also became widely associated with quackery.



Franz Mesmer

1842 March 30: On this date, Dr. Crawford W. Long--using sulphuric ether--gave the first anesthetic for a surgical procedure--the removal of a tumor on the neck of James Venable in Jefferson, Georgia. This event is the first known administration of a gas for surgical pain relief. Long did not publish an account until 1849. For most of the years since that first anesthetic, Crawford W. Long received little recognition for his accomplishment. In the past two decades some credit has at last been granted for Dr. Long's role in introducing this important innovation in medicine. Doctor's Day--March 30-- is one tangible and important symbol of the restoration of Dr. Long to his rightful place in history.

1845 March 12: Francis Rynd published his work in the *Dublin Medical Press* on injections with a hollow needle hypodermic syringe he developed. See <http://bit.ly/1ehbMKY>

1847 March: French physiologist Marie Jean Pierre Flourens [1794-1867] determined that inhalation of chloroform caused the same temporary state in animals as did ether. Flourens is best known for proving that the respiratory center is in the medulla and the function of the cerebellum in muscular coordination; he also studied bone formation. He was a professor at the Collège de France for many years. In November 1847 Scottish physician James Young Simpson demonstrated the anesthetic properties of chloroform in humans.

1847 March 11: Less than six months after William Morton's demonstration of ether anesthesia in Boston, the first ether anesthetic was administered in Latin America. Dr. Vincente Antonio de Castro, a surgeon at the Hospital San Juan de Dios in Havana, Cuba, performs a successful bilateral hydrocele on the anesthetized patient.

1850 March 30: The first issue of *Household Words* appeared in England. This publication was the first of two weekly newspapers Charles Dickens would edit. The author used *Household Words* to call attention to a number of social ills, and his novel *Hard Times* was first serialized in its pages. The paper lasted until 1859. In 1851 an issue included Percival Leigh's "Some Account of Chloroform" [3: 151-155]. The publication of this essay may have reflected Dickens' concerns about amputation and other surgical procedures; characters with wooden legs appear in many of his novels.

1852 March 26: "On this day Dr. William Mallett of Fayetteville, North Carolina, performed one of the first Cesarean sections in the southern United States where the mother survived. In most instances, the mother generally died of shock as a result of the surgery. Dr. Mallett performed the operation on a 17-year-old woman without the use of anesthesia. The mother had refused the use of chloroform and ether for religious reasons. Her child did not survive." Dr. Mallett, born in 1819, died in 1889 [Source: Powell WS, ed. *Dictionary of North Carolina Biography*; for more about religious objections to anesthesia, see Swanson GA. The Religious Objections and Military Opposition to Anesthetics, 1846-1848. *Bulletin of Anesthesia History* 23(2): 1, 4-5, 14, April 2005]

1898 March: At a meeting of the Society of Anaesthetists in England Alfred Coleman described his technique for nasal administration of nitrous oxide and Stephen A. Coxon advocated continuous insufflation of pure nitrous oxide into the pharynx.

1909 March 24: John Millington Synge, Irish dramatist and poet [*Riders to the Sea*, etc.] died. He was born April 16, 1871. In 1916 a fascinating account of his experiences under ether anesthesia was published posthumously: "I seemed to traverse whole epochs of desolation and bliss. All secrets were open before me...." he wrote. [Under ether. Personal experiences during an operation. *Interstate Medical Journal* 23:45-49, 1916]. Synge's account is part of a large body of literature related to anesthesia and mystical experiences.

1930 March 23: Russian surgeon Sergei Yudin performed the first transfusion of cadaver blood into a human.

1934 March 8: In Wisconsin, Ralph M. Waters administered the first use of thiopental in man.



Ralph M. Waters, M.D.

[Source: <http://page2anesthesiology.org/>]

1937 March 15: First blood bank was established in Chicago, Illinois.

1939 March 5: British actress Samantha Eggar was born in London. One of her earliest prominent film roles was Miranda Grey in the 1965 version of John Fowles' novel *The Collector*. That 1963 novel tells the story of Frederick Clegg, a meek clerk and butterfly collector who decides to elevate his collecting and kidnaps beautiful art student Grey as she is walking home from class. Clegg uses a rag soaked in chloroform to subdue her. The film version also featured Terence Stamp as Clegg. Both novel and film have extended scenes of the criminal use of chloroform. [For more information on such real-life uses of chloroform, see Payne JP. The criminal use of chloroform. *Anaesthesia*. 1998 Jul;53(7):685-90]

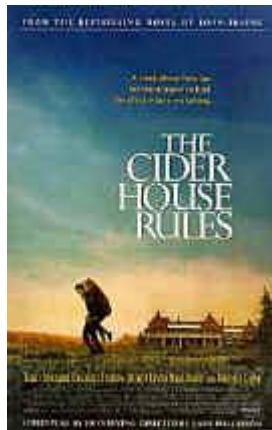
1939 March 28: The first written examination by the American Board of Anesthesiology was given. <http://1.usa.gov/1eEsp2E>

1942 March 2: American author John Irving was born in Exeter, New Hampshire. His novels include *The World According to Garp* and *The Hotel New Hampshire*. His 1985 novel *The Cider House Rules* is set in a Maine orphanage presided over by the kindly ether-addict Dr. Larch.

1944 March 21: Carl Koller died. In the early 1880s he was a house surgeon at the Vienna General Hospital and along with his friend Sigmund Freud studied the physiological effects of cocaine. Freud eventually lost interest, but Koller continued the research and in 1884 discovered the local anesthetic properties of the drug when he injected a weak solution of cocaine into the eye of a frog. Koller was born December 3, 1857.



Carl Koller



1948 March 8: The Alabama State Society of Anesthesiologists was founded by Drs. Alice McNeal, Hiram Elliott, Alfred Habeeb and E. Bryce Robinson, Jr., in Birmingham. Dr. Robinson was elected President, Dr. William May of Montgomery, Vice-President, and Dr. McNeal Secretary-Treasurer. Dr. Robinson was appointed Delegate and Dr. May, Alternate. [ASA Newsletter 12(5):7, May 1948] “Dr. Hiram Elliott recalled how the little group gave birth to organized anesthesiology in the state. ‘We got together—the four of us, Dr. McNeal, Dr. Robinson, Dr. Habeeb and I—at Dr. Robinson’s house one night, and we organized the Jefferson County Society of Anesthesiologists,’ said Elliott. ‘At the same time, we decided we might as well organize the State Society of Anesthesiologists. So we organized both of them that same night.’” [Anita Smith, *The Boss*: Lloyd Noland, M.D., 1986, p. 260] The application for a charter by the state society was approved by the ASA on May 4, 1948. [ASA Newsletter 12(6):3, June 1948] Dr. McNeal was Chief of Anesthesia in the Department of Surgery, University of Alabama School of Medicine; the others were anesthesiologists in private practice. Dr. McNeal was the first female anesthesiologist to practice in Alabama. Dr. Habeeb completed the first anesthesia residency in Alabama, at the urging of Dr. Lloyd Noland at the TCI Hospital in Fairfield in the late 1930s. Dr. Habeeb was also the first ABA Diplomate in Alabama.



John Snow, M.D.

THIS MONTH IN ANESTHESIA HISTORY: APRIL

1578 April 1: William Harvey, the English physician who first described blood circulation, was born.

1755 April 15: Samuel Johnson's *Dictionary of the English Language* was published. The work is considered a landmark of its kind, but does not contain the word "anaesthesia" which was in limited use in English at the time. Used by the ancient Greek and Romans, the word did appear in several English language dictionaries before Johnson's, including Phillips, *The New World of Words: or, Universal English Dictionary* (6th Ed., 1706), followed by Bailey, *Universal Etymological English Dictionary* (1721); James, *Medical Dictionary* (1743); and the *New and Complete Dictionary of Arts and Sciences* (1754). A recent book about the creation of Johnson's *Dictionary* is Henry Hitchings' *Defining the World: The Extraordinary Story of Dr. Johnson's Dictionary* [2006].

1760 April 13: Thomas Beddoes was born at Shifnal, Shropshire, England. He received his M.D. from Oxford in 1786. In the late 1780s Dr. Beddoes began attempts to implement Joseph Priestley's idea for the therapeutic applications of "factitious airs" or gases. By 1798 Beddoes had established the Pneumatic Institute in Clifton, England, and hired the teenage Humphry Davy as Research Director. Their experiments with nitrous oxide and many other gases began the following year. In December 1799 Beddoes published a pamphlet which is the first extensive description of some of these experiments--the first human inhalations of nitrous oxide--and which preceded Davy's famous book by six months. Among numerous other medical and political works, Beddoes authored the classic *Observations on the Nature of Demonstrative Evidence* [1793], the first work in English to discuss the great German philosopher Immanuel Kant's *Critique of Pure Reason*. His son, Thomas Lovell Beddoes [1803-1849], was also a physician and author. Beddoes died in Clifton, near Bristol, on December 24, 1808. A recent book about Beddoes and his circle is Mike Jay's *The Atmosphere of Heaven: The Unnatural Experiments of Dr. Beddoes and His Sons of Genius* [Yale University Press, 2009].



Thomas Beddoes, M.D.

1770 April 7: English poet William Wordsworth was born. In 1799 Wordsworth, when both were living in Bristol, asked Humphry Davy to read and suggest revisions to the manuscript for the second edition of *Lyrical Ballads*, the landmark collection of poetry by Wordsworth and Samuel Taylor Coleridge. During this period Davy and Thomas Beddoes were engaged in their studies of nitrous oxide and other gases. Wordsworth later became Poet Laureate and authored *The Prelude* among many other poems.



William Wordsworth in 1798

1790 April 17: Benjamin Franklin died in Philadelphia. In addition to his many other achievements, Franklin participated in the first investigation of the animal magnetism claims of physician Franz Anton Mesmer. In 1781 Mesmer left Vienna and relocated in Paris, where the popularity of his claims of healing continued. Wolfgang Amadeus Mozart performed a musical play in Mesmer's honor; Queen Marie Antoinette was also a follower. However, King Louis XVI

did not fall under Mesmer's spell and asked the French Academy of Sciences to investigate his therapeutic claims. Franklin was one of the many notables appointed to this commission.[See. for instance, McConkey KM, Perry C. Benjamin Franklin and Mesmerism, revisited. *Int J Clin Exp Hypn* 50(4): 320-331, October 2002] Mesmer's life is depicted in the 1994 film *Mesmer* starring Alan Rickman.

1799 April 17: In a letter published in *Nicholson's Journal*, Humphry Davy announced to the world that nitrous oxide can be inhaled by humans. "I have this day made a discovery," he wrote, "which, if you please, you may announce in your Physical Journal, namely that the nitrous phosoxyd or gaseous oxyd of azote, is respirable when perfectly freed from nitric phosoxyd (nitrous gas)." This observation resulted from work on various gases done by Davy, Dr. Thomas Beddoes and others at Beddoes' Pneumatic Medical Institute in Clifton, near Bristol, England. In July of 1800 Davy published his massive book on this gas research, *Researches, Chemical and Philosophical; Chiefly Concerning Nitrous Oxide, or Dephlogisticated Nitrous Air, and its Respiration*.

1805 April 2: Danish author Hans Christian Andersen was born in Odense. Andersen was a frequent traveler and kept a diary during his trips. In August, 1847, he visited Edinburgh, Scotland, for several days. Several dinners were arranged by the locals for this famous author, and on the night of August 17 Andersen and numerous others dined at the house of prominent physician James Young Simpson. In his autobiography, Andersen wrote that "...in the large circle which was gathered there several experiments were made with breathing in ether. I thought it distasteful, especially to see ladies in this dreamy intoxication...there was something unpleasant about it, and I said so, recognizing at the same time that it was a wonderful and blessed invention to use in painful operations..." Simpson did not discover the anesthetic properties of chloroform until November of that year. [See Secher O. Hans Andersen and James Young Simpson. *Br J Anaesth* 44:1212-1216, 1972] Andersen died in Copenhagen on August 4, 1875.



Hans Christian Andersen in 1869

1807 April 18: British physician and writer Dr. Erasmus Darwin died. The grandfather of Charles Darwin, Erasmus was a member of the famed Lunar Society of scientists and industrialists who provided financial and other support to Dr. Thomas Beddoes' investigations of the medical uses of gases in the 1790s. Darwin was a prolific author on medical and scientific subjects and developed a theory of evolution decades before Charles.

1824 April: Before ether anesthesia developed in the 1840s, inhalation of ether vapor in "frolics" was apparently a popular pastime. Crawford Long participated in some of these parties in Georgia before trying the effect on one of his surgical patients in 1842. What follows is an 1824 report of such activities in Philadelphia. "Medical Report: Of late our city has been in some danger from another disease, which, as it must have a title, I shall take the liberty of styling an Artificial Epidemic. It has been recently ascertained that the vapour of Vitriolic Ether, when inhaled into the lungs, produces effects upon the brain and nervous system similar to those of the nitrous oxide gas. This fact was no sooner made public than a thousand experimenters started up, including all ages and both sexes. The smell of Ether prevailed every where. Even the little school boys were seen clubbing their pennies to purchase a vial of the exhilarating fluid, which put into a prepared bladder and eagerly passed from one to another, in some unfrequented spot. We might perhaps feel amused at the ridiculous capers supposed to be cut by these groups had no serious consequences resulted from it. But having ourselves witnessed the serious indisposition of several young ladies, which could be ascribed to breathing Ether, and heard of two well attested cases in which this practice proved fatal, it behoves us to condemn the use of this fluid by inhalation as highly pernicious and dangerous." --*The Port-Folio* April 1824, p 326 [The *Port-Folio* was a Philadelphia newspaper published from 1801 until 1827]

1829 April 12: Dr. Jules Cloquet amputated a breast from a woman asleep under hypnosis.

1830 April 5: Henry Hill Hickman died. Six years earlier Hickman had attempted anesthesia in a series of experiments on animals using carbon dioxide gas. Scientists in both France and England [including Humphry Davy!] failed to recognize Hickman's achievement. "Nevertheless, he deserves the credit of having been the first of the modern investigators to prove by experimentation on animals that the pain of surgical operation could be abolished by the inhalation of a gas." [Keys TE. *The History of Surgical Anesthesia*. Krieger, 1978, p.19]

1847 April 7: Physician and dentist Nathan Cooley Keep administered the first obstetric anesthetic in the United States in Cambridge, Massachusetts. Dr. Keep was both a prominent physician of the Boston area and the first Dean of Dentistry at Harvard. The patient was Fanny Longfellow, second wife of poet Henry Wadsworth Longfellow; that day she delivered the third of their six children together. In his journal entry for April 1, the famed poet and scholar had noted, "Went to town the first time for several weeks and had a conversation with Dr. Keep about the sulphuric ether and its use."



A daguerreotype of Longfellow ca. 1850



Fanny Longfellow; they married in 1843

Under ether anesthesia, Fanny did not lose consciousness but felt no pain during the birth of her daughter. She later wrote to her sister-in-law about her experience, "I am very sorry you all thought me so rash and naughty in trying the ether. Henry's faith gave me courage...I feel proud to be the pioneer to less suffering for poor, weak womankind. This is certainly the greatest blessing of this age and I am glad to have lived at the time of its coming and in the country which gives it to the world..." The day after this successful delivery, Longfellow stopped by Dr. Keep's office and later wrote that he had "a double tooth extracted under the ethereal vapor. On inhaling it, I burst into fits of laughter. My brain whirled round, and I seemed to soar like a lark spirally into the air." You can find more information about these events in Dr. Richard Clark's "Fanny Longfellow and Nathan Keep" in the September 1997 issue of the *ASA Newsletter* and Dr. Herschel H. Reynolds' "A courageous lady--Mrs. Henry Wadsworth Longfellow" in the December 1957 issue of the *Journal of the American Dental Association*.

1852 April 29: First edition of Peter Mark Roget's famous thesaurus was published in England. After graduation from medical school in Edinburgh, Roget spent 1799 in Bristol working with Thomas Beddoes and Humphry Davy on their famous nitrous oxide research. Roget later wrote the *Encyclopedia Britannica* entry on Beddoes and near the end of his life created the thesaurus for which he is so well known. Roget also invented the slide rule and the pocket chessboard and did research on vision physiology later used as the basis for motion pictures. A recent biography of Roget is Joshua Kendall's *The Man Who Made*

Lists [2008].

1853 April 7: Dr. John Snow chloroformed Queen Victoria for the birth of Prince Leopold. In his case book, Snow noted, "Administered chloroform to the Queen in her confinement...Here Majesty expressed great relief from the application...the Queen appeared very cheerful and well [after expulsion of the placenta], expressing herself much gratified with the effect of the chloroform." [See Ellis RH, ed. *The Case Books of Dr. John Snow*. Wellcome Institute for the History of Medicine, 1994, p. 271]

1856 April 12: Dr. Marshall Hall [1790-1857] described artificial respiration in *The Lancet*.

1868 April: The Odontological Society of Great Britain and the Committee of Management of the Dental Hospital of London created a committee to investigate nitrous oxide. In its first report in December 1868, the committee stressed the elimination of air inhalation during nitrous oxide administration, but warned of the lethal potential of this method. See "Protoxide of Nitrogen as an Anaesthetic" published in the *British Medical Journal* on December 12 of that year [2:622, 1868].

1869 April 8: The great neurosurgeon Harvey William Cushing was born in Cleveland, Ohio. In 1894 Cushing and his fellow "house pup" at the Massachusetts General Hospital, E.A. Codman, developed the first anesthesia record.

1871 April 16: John Millington Synge, Irish dramatist and poet [*Riders to the Sea*, etc] was born. In 1916 a fascinating account of his experiences under ether anesthesia was published posthumously: "I seemed to traverse whole epochs of desolation and bliss. All secrets were open before me...." he wrote. [Under ether. Personal experiences during an operation. *Interstate Medical Journal* 23:45-49, 1916]. Synge's account is part of a large body of literature related to anesthesia and mystical experiences. He died March 24, 1909.

1887 April 27: George Thomas Morton, son of William T.G. Morton, performed the first appendectomy.

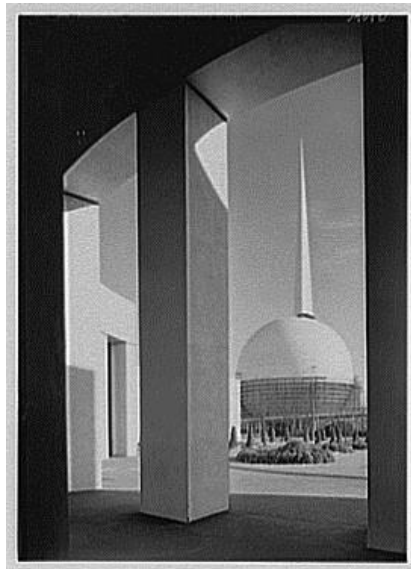
1889 April 18: Actor/director Charlie Chaplin was born. In the 1914 silent film *Laughing Gas* he played a dental assistant; hilarity ensues.

1898 April: Henry Hillard described induction of nitrous oxide anesthesia with face mask and maintenance of anesthesia with nasopharyngeal insufflation.

1923 April 7: First brain tumor operation under local anesthesia was performed by Dr. K. Winfield Ney at Beth Israel Hospital in New York City.

1939 April 30: The New York World's Fair opened. Included in the opening ceremonies was an address by President Franklin D. Roosevelt via a brand-new medium, television. "The 1939 New

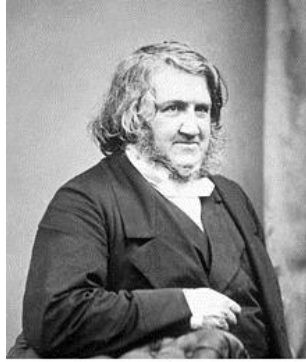
York World's Fair [also] presented a unique opportunity for the newly recognized specialty of anesthesiology to be presented to the general public. With funding supplied by the Winthrop Chemical Company of New York City and careful planning, a committee of physician-anesthetists was able to design a display that illustrated all aspects of the physician-anesthetist's role in health care: general "gas" anesthesia, regional techniques, pain management, resuscitation, and oxygen therapy. Further information was offered concerning training of physicians in the specialty, and speculation involving the future mission of anesthesiology was presented. Surprisingly, issues and discussions concerning the fashion in which anesthesia was to be presented at this exhibit remain germane to current presentations of the specialty to the general public. Although no record remains of the public's response to the exhibit, the World's Fair was an international showcase and an important opportunity for public recognition of anesthesiology." [abstract for Bacon DR, Lema MJ, Yearley CK. For all the world to see: anesthesia at the 1939 New York World's Fair. *J Clin Anesth* 5:252-258, 1993]



Trylon, Perisphere and Helicline at the 1939 World's Fair in NYC
photo by Sam Gottscho

2005 April 17: Lt. Commander Wheeler B. Lipes died in New Bern, North Carolina. In September 1942 Pharmacist's Mate Lipes was aboard the submarine Seadragon on patrol in the South China Sea and about a week's journey from the nearest Allied port. A young seaman named Darrell Dean Rector developed appendicitis, and Lipes, who had observed several appendectomies as a laboratory technician in a naval hospital, became the surgeon. Metal spoons were bent at right angles to use as muscle retractors, and sulfa pills were ground up and used as the antiseptic. An ether mask was made from a tea strainer covered with gauze, and the ship's communications officer, Lt. Franz P. Hoskins, became the anesthetist. The surgery was successful and one of two such operations performed aboard U.S. submarines during World War II. Seaman Rector was later one of 78 crewman lost aboard the submarine Tang when it was struck by a torpedo in October 1944. George Weller of

the Chicago *Daily News* won a Pulitzer Prize for his article about the surgery, which was featured in such films as *Destination Tokyo* [1943] and *Run Silent, Run Deep* [1958] and on the 1950s television series, *The Silent Service*. This event was also featured on the Cavalcade radio program episode "Pharmacist's Mate" broadcast on May 23, 1943, and starring Will Geer. Lipes' obituary appeared in the New York *Times* on April 20, 2005.



J. Y. Simpson
James Young Simpson, M.D.

This Month in Anesthesia History: May

1734 May 23: Franz Anton Mesmer was born. "Under the protection of Marie Antoinette, this Viennese physician received a grant of 30,000 francs from Louis XVI to study the magnetic influence of the stars on human beings. His *Memoire sur la decouverte du magnetisme animal* [1779] described cures with magnets and hypnosis." [Accardo, *The Medical Almanac*] Mesmer died in March, 1815. In the years before ether's anesthetic properties were demonstrated by Morton in 1846, such British surgeons as James Esailie, John Elliotson and James Braid experimented extensively with "mesmerism" as a method of surgical pain relief and published various accounts of their successes.



Franz Anton Mesmer

1744 May 31: Inventor Richard Lovell Edgeworth was born in Bath, England. In his long career Edgeworth served as a member of Parliament and was a Fellow of the Royal Society. His friends included French philosopher Rousseau, engineer James Watt, and Dr. Erasmus Darwin, Charles'

grandfather. Edgeworth was both a prolific author and inventor. One of his inventions was the "tellograph" for which 30 tall towers were built across the 130-mile distance between Galway and Dublin. Coded messages were to be transmitted in eight minutes using large triangular pointers; however, Ireland's weather prevented the consistent visibility needed for success of the project. Edgeworth fathered 22 children by four wives. One of his daughters, Anna, married Dr. Thomas Beddoes, who along with Humphry Davy and numerous others investigated the properties of nitrous oxide inhalation in Bristol in 1799 and 1800. Another daughter, Maria, became a novelist of some note and was a frequent observer of the nitrous oxide experiments. Edgeworth was also a financial patron of Beddoes' Pneumatic Medical Institute where those experiments were conducted. Edgeworth died in 1817; his amazing life is detailed in D. Clarke's biography, *The Ingenious Mr. Edgeworth*.



Richard Lovell Edgeworth in 1812
[1744-1817]

1794 May 8: Antoine Laurent Lavoisier [b.1743], a tax collection official, was beheaded in the early days of the French Revolution. Also a chemist, Lavoisier proposed "oxygen" as the name of the substance isolated by Joseph Priestley, who had called it "dephlogisticated air." Lavoisier is known as the father of modern chemistry because of his theories of combustion, his creation of a new system of chemical nomenclature and his authorship of what is considered the first modern chemistry textbook.



Portrait of Antoine-Laurent Lavoisier and his wife by Jacques-Louis David, ca. 1788

1819, May 31: Walt Whitman, one of America's greatest poets, was born in West Hills, New York. In 1855 Whitman self-published the first version of his collection *Leaves of Grass*; he would continue to expand and revise the work until his death in Camden, New Jersey, on March 26, 1892. Whitman's great work is, among other things, a portrait of the United States that includes such technological advances as photography, locomotives, steam-driven ferries--and the use of ether for surgical pain relief. During the Civil War Whitman served unofficially as a nurse in several hospitals in the Washington, D.C., area. His poem "A March in the Ranks, Hard-pressed" twice mentions "the smell of ether" along with "the odor of blood" and "the doctor's shouted orders." A recent biography of Whitman is *Walt Whitman: The Song of Himself* by Jerome Loving [University of California Press, 1999].

1829 May 29: Sir Humphry Davy died; he was born in 1778. In addition to his pioneering work with nitrous oxide in Bristol in 1799 and 1800, Davy in 1815 invented a miner's safety lamp that saved many lives in British coal mines. Davy served as Professor of Chemistry at the Royal Institution in London from 1802-1812 during which he made numerous contributions to that science. In 1820 he was elected President of Britain's Royal Society, and at his death he was one of the world's most renowned scientists. His great contribution to anesthesia history is the massive book *Research, Chemical and Philosophical, Chiefly Concerning Nitrous Oxide*, published in the summer of 1800. Davy was the first human to inhale that gas.

1844 May 24: Friedrich Trendelenburg was born in Berlin. In addition to the operative position for which he is still known, this surgeon developed an eponymous cannula and cone, a test, a gate, and a sign. Mentors included Joseph Lister and Bernhard von Langenbeck. He was

interested in vital functions during sedation and determined that chloroform was safer than ether. He also used tracheostomy and artificial ventilation before Franz Kuhn's early 20th century description of tracheal intubation. He died in 1924. [See Cassidy L et al. Friedrich Trendelenburg: historical background and significant medical contributions. *Clin Anat* 2014 Jan 17 Epub ahead of print]

1846 May 8: First major battle of the U.S. war with Mexico was fought at Palo Alto, Texas. Ether anesthesia was first used in a military conflict in this war, sometime in the spring of 1847 under the direction of American surgeons Edward H. Barton and John B. Porter. [See Aldrete JA, Marron GM, Wright AJ. The first administration of anesthesia in military surgery: on occasion of the Mexican-American War. *Anesthesiology* 61:585-588, 1984 AND Houghton IT. Some observations on early military anaesthesia. *Anaesth Intensive Care*. 2006 Jun;34 Suppl 1:6-15] The Library of Congress offers an excellent list of resources on this conflict at <http://www.loc.gov/rr/program/bib/mexicanwar/>

1846 May 8: George Poe, Jr., was born in Elkridge Landing, Maryland. He developed a machine for mechanical ventilation that could be used on victims of drowning or gas asphyxiation. His Poe Chemical Works in Trenton, New Jersey, was the first American plant to produce commercial quantities of liquid nitrous oxide. By the early 1880s some 5000 dentists used this product. He died on February 3, 1914, in Norfolk, Virginia. More information can be found in his Wikipedia entry.

1848 May: The first annual meeting of the American Medical Association was held in Baltimore. This meeting produced an extensive report by the Committee on Surgery: Anaesthetic agents. *Transactions of the American Medical Association* 1:176-224, 1848. The report included a discussion of the physiological effects of ether and chloroform and includes lists and reports of cases at the Massachusetts General Hospital in Boston, the New York Hospital and the clinics of the University of Pennsylvania and Jefferson Medical College. Ether anesthesia had been demonstrated at MGH by William Morton just the previous October.

1859 May 22: Arthur Conan Doyle was born. His creation Sherlock Holmes first appeared in print in A Study in Scarlet on December 1, 1887. [See Maltby JR. Sherlock Holmes and anaesthesia. *Can J Anaesth* 35:58-62, 1988 and Bergman NA. Sherlock Holmes and his gasogene. *Pharos* 58(3): 35-37, summer 1995]

1862 May 6: Henry David Thoreau, American naturalist and author, died from bronchial and respiratory problems at age 44. Thoreau moved into his famous cabin on Walden Pond on July 4, 1845. Thoreau apparently had just one experience with anesthetics a few years later. In May 1851, Thoreau received ether when his dentist removed some teeth. On May 12, Thoreau described the event in his journal. "By taking the ether the other day I was convinced how far asunder a man could be separated from his senses," Thoreau began the lengthy journal entry. "You expand like a seed in the ground. You exist in your roots, like a tree in winter. If you have an inclination to travel, take the ether: you go beyond the farthest star." In the final paragraph

of his description, Thoreau seems to undercut his own enthusiasm. "It is not necessary for them to take ether, who in their sane and waking hours are ever translated by thought..." His account is one of a number from the late nineteenth and early twentieth centuries that describe mystical experiences while undergoing anesthesia. Thoreau was born in Concord, Massachusetts, on July 12, 1817.



Daguerreotype by Maxham of Henry David Thoreau from 1856

1863 May 2: Confederate General Thomas Jonathan "Stonewall" Jackson was wounded by fire from his own troops at the battle of Chancellorsville. "Jackson's left arm was shattered 2 inches below the shoulder joint by a ball that also severed the brachial artery with a second ball passing through the same arm between the elbow and the wrist." Under enemy fire, his men lifted and dragged Jackson toward their lines. Finally placed on a litter, he fell off when one of the bearers was killed. Another bearer stumbled, dropping Jackson again. At last Jackson reached a field hospital, and he was placed under the care of Dr. Hunter Holmes McGuire, an innovative surgeon and expert on the use of chloroform. Early on the morning of Sunday, May 3, McGuire, aided by his anesthetist, a Dr. Coleman, amputated the left arm about two inches below the shoulder. Open drop chloroform was used. Jackson soon awoke, but by the following Thursday had taken a turn for the worse. Finally, on Sunday, May 10, Jackson died with his wife and child by his side. "Let us cross over the river, and rest under the shade of the trees" were his final words. [See Albin MS. The wounding, amputation and death of Thomas Jonathan "Stonewall" Jackson --some medical and historical insights. *Bull Anesth History* 19(4): 1, 4-7, 15-16, October 2001]

1870 May 6: Scottish physician James Young Simpson died. Simpson discovered the anesthetic properties of chloroform and introduced the agent into obstetrical practice. At the time of his death Simpson was one of the best known physicians in Europe; 80,000 people were said to have lined the streets of Edinburgh for his funeral procession.

1886 May 15: American poet Emily Dickinson died. One of her most famous poems includes: "Pain has an element of blank;/It cannot recollect/Where it began, or if there were/A day when it was not."

1899 May: Paterson described a face mask with an air dilution port.

1920 May: Arthur Guedel's first paper "on the importance of the physiologic factors in inhalation anesthesia" [Keys, *The History of Surgical Anesthesia*, p. 77] appeared in the *Bulletin of the National Anesthesia Research Society*.

1922 May 19: Heinrich Irenaeus Quincke, German internist died in Frankfurt am Main [Quincke was born on August 26, 1842]. Among other notable medical achievements, in the early 1890s Quincke introduced lumbar puncture as a diagnostic and therapeutic tool.



Heinrich Irenaeus Quincke

1997 May 19: Francis F. Foldes, MD, died. Dr. Foldes was an expert on muscle relaxants, local anesthetic agents, and myasthenia gravis who published almost 600 papers and co-authored four books. In 1962 he became the first Chair of the Department of Anesthesiology at Montefiore Medical Center in the Bronx, New York, and served in that post until his retirement in 1975. Dr. Foldes was born June 13, 1910, in Hungary. An obituary published in the *ASA Newsletter* can be found in the July 1997 issue.



Francis F. Foldes, MD
[1910-1997]

[Source: Hungarian Society of Anaesthesiology and Intensive Therapy
http://www.anesztinfo.hu/info.aspx?&web_id=&sp=9]

2000 May 25: The first National Anaesthesia Day was held in Great Britain under the auspices of the Royal College of Anaesthetists.

2004 May 2: John D. (Jack) Michenfelder, M.D. died at the age of 73. He completed his residency in 1961 at the Mayo Clinic and then joined the anesthesiology staff there. Dr. Michenfelder is known world-wide for his contributions to neuroanesthesia, especially for his work on cerebral blood flow and metabolism and their responses to anesthetic agents and hypothermia. He had also published important articles on venous and cerebral air embolism. He was the first President of the Society for Neurosurgical Anesthesia and helped to create the establishment of neuroanesthesia as a subspecialty of anesthesiology. Jack Michenfelder was honored by the ASA with the Award for Excellence in Research in 1990 and was the 1988 E. A. Rovenstine Memorial Lecturer. He was a member of the editorial boards of many journals dedicated to the neurosciences and from 1979-1985 was the Editor-in-Chief of Anesthesiology. As a signal honor, Dr. Michenfelder was one of only a handful of anesthesiologists ever elected to the Institute of Medicine of the National Academy of Sciences. --Maurice Albin, M.D. [UAB Anesthesiology *Tuesday Report*, May 18, 2004]



John D. Michenfelder, M.D.

[Source: <http://neuroanesthesiologia.mx/Biogrs/JDMich.htm>]

2006 May 8: Prominent European anesthesiologist Jan F. Crul died. Between 1950 and 1995 Dr. Crul authored more than 100 scientific papers in both English and Dutch. He edited three textbooks, *Legal Aspects of Anaesthesia* (1989), *Mass Spectrometry in Anaesthesiology* [with M.D. Vickers, 1981] and *Patient Monitoring* (with J.P. Payne, 1970). Dr. Crul was very active in the Netherlands Society of Anaesthesiology.



Humphry Davy portrait by Thomas Phillips

This Month in Anesthesia History: June

1667 June 15: Although the exact date is disputed, a Parisian physician and astrologer, Professor Jean-Baptiste Denis (1640?-1704, sometimes spelled "Denys"), performed the first blood transfusion involving a human on either June 15 or 28, 1667. The patient was a feverous young man on whom other doctors had employed leeches 20 times; after Denis transfused him with several ounces of either dog or lamb's blood, he "rapidly recovered from his lethargy." Denis used a similar method to cure a madman, and a few more experiments by scientists in France and London were deemed successful. Denis had first experimented with animal-to-animal transfusions; he published a letter in the *Journals des Scavans* describing his work. But after one patient died, Denis was tried for murder. He was exonerated -- because it turned out the patient's wife had used poison -- but soon blood transfusions were banned throughout Europe. Over a century passed before the first attempts at human-to-human transfusions. [From the Center for the Study of Technology and Society's "Today in Tech History"; see also Moore P. *Blood and Justice: The Seventeenth-Century Parisian Doctor Who Made Blood Transfusion History*. Wiley, 2003]

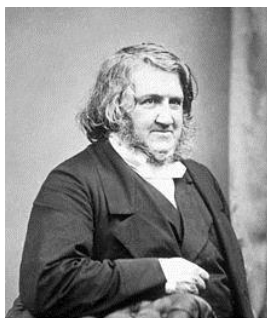
1752 June 13: English novelist and diarist Fanny Burney was born. One of her best known works is *Evelina, or The History of A Young Lady's Entrance into the World*, her first novel published anonymously in 1778. When her authorship of the popular novel became known, Burney's fame was assured. In 1802 Burney and her family moved to France, where they remained for ten years. On September 30, 1811, Burney underwent a mastectomy for suspected breast cancer; she refused any drugs or alcohol. Between March and May 1812, Burney wrote a detailed letter describing her experience of surgery without anesthesia. The letter, along with the doctors' report written on October 1, 1811, can be found in Hemlow J, et al, eds., *The Journals and Letters of Fanny Burney* (Madame d'Arblay) (Oxford at the Clarendon Press, 1975, Vol. VI, pp. 596-616). Burney died on January 6, 1840.

1783 June 19: Friedrich Wilhelm Adam Ferdinand Serturmer was born in Neuhaus, Germany. In 1805 Serturmer, an assistant apothecary, discovered morphine, the active ingredient in laudanum. Serturmer died in 1841.

1800 June 25: Humphry Davy completed the introduction to his classic work, *Researches, Chemical and Philosophical; Chiefly Concerning Nitrous Oxide, or Dephlogisticated Nitrous Air, and its Respiration*. The work is published the following month by London publisher Joseph Johnson.

1805 June 21: Charles Thomas Jackson was born in Massachusetts. In 1846 one of his students at the Harvard Medical School, dentist William Thomas Green Morton, was searching for a gas to use to obtain pain relief in his dental patients. In January, 1845, Horace Wells had unsuccessfully tried to demonstrate anesthesia at the Massachusetts General Hospital using nitrous oxide. Jackson suggested to Morton that he use sulfuric ether; Morton experimented with that agent on animals, himself, then his dental patients and finally in the successful surgical anesthetic at MGH in October, 1846. In the subsequent bitter debate over who "discovered" anesthesia, Jackson attempted to claim the achievement himself. He also claimed to have given Samuel Morse the idea for the telegraph and to have invented the explosive known as guncotton. Jackson had received his medical degree in 1829, taught at Harvard for a number of years and was also known for his achievements in geology and chemistry. By 1873, however, Jackson—who apparently suffered a stroke-- had been admitted to an insane asylum where he died in 1880. A recent biography that attempts to give Jackson his true place in anesthesia history is *Charles Thomas Jackson "The Head Behind the Hands"* by Richard J. Wolfe and Richard Patterson [History of Science, 2007].

1811 June 7: James Young Simpson was born in Bathgate, near Edinburgh, Scotland. In late 1847 Simpson and others discovered the anesthetic properties of chloroform.



J. Y. Simpson
James Young Simpson

1835 June 2: Phineas Taylor Barnum's circus began its first tour of the United States. In 1841, Barnum opened his American Museum on Broadway in New York City. The museum featured five floors of changing exhibits and attractions and gained a reputation as the most visited place

in America. For a brief period between November 1844 and March 1845, the museum offered exhibitions of laughing gas inhalation. One of his advertisements in the New York Tribune declared, "This most amusing exhibition will be given at each performance, and its ludicrous effects will be manifested in the most unique speeches, songs, gestures, etc." Why Barnum ended these demonstrations after a few months is not clear; however, they were one example of many in New York and other American cities throughout most of the nineteenth century. [See, for example, Wright AJ. Gardner Quincy Colton's 1848 visit to Mobile, Alabama. In: Barr AM, ed. *Proceedings of the History of Anaesthesia Society* 25:31-47, 2000] The American Museum was destroyed by fire on July 13, 1865. Barnum, born on July 5, 1810, died on April 7, 1891.

1857 June 26: John G. Orton, a Binghamton, New York, physician, first used amylene successfully in the United States. Amylene was an anesthetic agent first used clinically in England by John Snow, who quickly abandoned its use after two of his patients died.

June 16, 1858: John Snow [born in 1813] died; he is considered the first professional anaesthetist in Great Britain. In 1847 he began to administer ether at St. George's Hospital in London and published a book on ether anesthesia. In 1853 and 1857 he administered chloroform to Queen Victoria for the births of Prince Leopold and Princess Beatrice, the last two of her nine children. These successful anesthetics were instrumental in promoting obstetrical pain relief in Great Britain. After that first anesthetic, the Queen confided in her diary entry for Friday, April 22: "Dr. Snow administered that blessed chloroform and the effect was soothing, quieting and delightful beyond measure." Snow is also an important figure in epidemiology; in 1854 he identified the source of a cholera epidemic in London as the contaminated public water pump in Broad Street. That achievement is explored in Steven Johnson's *The Ghost Map: A Story of London's Most Terrifying Epidemic—and How it Changed Science, Cities, and the Modern World* [2007]. A major biography of Snow, *Cholera, Chloroform, and the Science of Medicine* by Peter Vinten-Johansen et al, was published by Oxford University Press in 2003.



John Snow [1813-1858]

1863 June: Gardner Quincy Colton revived use of nitrous oxide in Hartford, Connecticut, when he administers it for dentist J.H. Smith. The gas had not been used in that city since Horace Wells last used it for his dental patients in 1845.

1878 June 16: Crawford Long [born in 1815] died. On March 30, 1842, Crawford Long made the first use of ether as a surgical anesthetic when he removed a tumor from the neck of patient James Venable. Long did not report this use of ether until after William Morton's demonstration of ether anesthesia for surgery in Boston in October, 1846



Crawford Long, M.D. on a 1940 U.S. postage stamp

1898 June: Bayer Company introduced heroin [first synthesized from morphine in 1874] for use as a non-addictive painkiller. The drug is later found to be more addictive than morphine and removed from market.

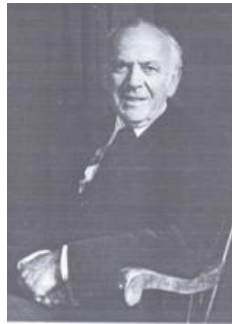
1909 June 7: Virginia Apgar was born in Westfield, New Jersey. In the late 1940s Apgar began developing the scoring system for newborn evaluation that bears her name; she presented the system at a meeting on September 21, 1952, and published it the following year. Dr. Apgar died in 1974. In October, 1994, a twenty-cent U.S. stamp honoring Virginia Apgar was released at the annual meeting of the American Academy of Pediatrics in Dallas, Texas. Selma Calmes, M.D., has written and lectured extensively on Dr. Apgar; one of her articles is "Virginia Apgar: a woman physician's career in a developing specialty." *J Am Med Womens Assoc.* 1984 Nov-Dec; 39(6):184-8. A recent biography written for young people is *Virginia Apgar: Innovative Female Physician and Inventor of the Apgar Score* by Melanie Ann Apel [Rosen, 2004]. Continuing popular interest in Dr. Apgar is demonstrated by the article "How's Your Baby? Recalling The Apgar Score's Namesake" by Melinda Beck was published in the May 26, 2009, issue of the *Wall Street Journal*.



Virginia Apgar, M.D.
1909-1974

[Source: <http://www.usstampgallery.com/>]

1910 June 13: Francis F. Foldes, MD, was born in Hungary. Dr. Foldes was an expert on muscle relaxants, local anesthetic agents, and myasthenia gravis who published almost 600 papers and co-authored four books. In 1962 he became the first Chair of the Department of Anesthesiology at Montefiore Medical Center in the Bronx, New York, and served in that post until his retirement in 1975. Dr. Foldes died on May 19, 1997.



Francis F. Foldes, MD
[1910-1997]

[Source: Hungarian Society of Anaesthesiology and Intensive Therapy
http://www.anesztinfo.hu/info.aspx?&web_id=&sp=9]

1915 June 1: One of the great English-language poems of the twentieth-century, "The Love Song of J. Alfred Prufrock," was first published in *Poetry* magazine. Author T.S. Eliot had actually completed the poem several years earlier. This portrait of modern spiritual and emotional paralysis opens with the lines "Let us go then, you and I,/When the evening is spread out against the sky/Like a patient etherized upon a table..." The month after its publication, Eliot married Vivien Haigh-Wood, who later became addicted to ether; she died in 1945. Their relationship is depicted in the 1994 film *Tom and Viv*. Born in St. Louis in 1888, Thomas Stearns Eliot moved to London in 1915, where he died in 1965. Among his other many famous works is the long poem *The Waste Land* and *Old Possum's Book of Practical Cats*, the basis of the musical *Cats*.



T.S. Eliot in 1934

1926 June 3: Allen Ginsberg, one of the best-known poets of the twentieth century, was born in Newark, New Jersey. His most famous works are probably the long poems "Howl" and "Kaddish for Naomi Ginsberg," the latter written for his mother. Associated with "beat" writers such as William S. Burroughs and Jack Kerouac, Ginsberg experimented with various consciousness-altering substances over the five decades of his writing career. "Kaddish" was written under the influence of various drugs, including nitrous oxide. Ginsberg also wrote a poem called "Laughing Gas" and refers to the effects of its inhalation in other poems such as "Five A.M." Ginsberg died in New York City on April 5, 1997.



Allen Ginsberg in 1985

1981 June 11: Sufentanil was first used in a human patient in the United States at University Hospital, University of Alabama School of Medicine in Birmingham. Led by Paul Samuelson, MD, the anesthesia team also included Kathy Dole, CRNA; Dee Wright, RN; and Lindsay McFarland, RN. The patient underwent cardiopulmonary bypass. Also involved in the clinical study of sufentanil were Drs. J. G. Reves and Eva Buttner. Details can be found in the *Anesthesiology UAB Newsletter* 2(3): 2, summer 1981.



William Thomas Green Morton

This Month in Anesthesia History: July

July 27: Feast of Saint Pantaleon, a physician and martyr and patron saint of headache sufferers.

1492 July 25: Giovanni Battista Cibo, born in Genoa, Italy, in 1432, died. On August 29, 1484, he became Pope Innocent VIII. An early attempt at blood transfusion involving Pope Innocent VIII was described by Stefano Infessura [ca. 1435-1500], an anti-papist lawyer in Rome. According to Infessura's *Diary of the City of Rome*, when the Pope was on his deathbed, a Jewish physician suggested infusing blood from three ten year-old boys into the pontiff's veins. All three donors died and Innocent himself died on July 25, 1492. The *Catholic Encyclopedia* warns that Infessura's work is full of gossip and not to be trusted.

1718 July 20: Johann Bernhard Quistorp [1692-1761] appeared in the great auditorium at the University of Rostock, Germany, to submit to a public examination of his doctoral thesis, *De Anaesthesia*. Written in Latin, Quistorp's dissertation was published in the same year. The word "anesthesia" had been used by the ancient Greeks and Romans and had several different meanings, one of which was "a state of insensitivity." The only known appearance of the word in modern Western literature prior to Quistorp is in Castelli's *Lexicon Medicum Graeco Latinum* published in 1713; his definition was "a privation of the senses." Yet the word must have been used for some decades prior; Quistorp's work consolidates the knowledge of his time about this physiological state. He defines "anaesthesia" as "a spontaneous, deep, more or

less persistent loss of sensation by the whole body, except by the organs supporting the pulse and respiration" and describes numerous causes, including "Vapors (fumes) entering the body may produce anaesthesia." Throughout the rest of the eighteenth and early nineteenth centuries the word appears in numerous medical dictionaries and other works. In 1846 Oliver Wendall Holmes, in a famous letter, suggested the word to describe the state produced by William Morton's ether administrations at Massachusetts General Hospital in October of that year. Quistorp's dissertation was first translated into English in 1999 by Ray J. Defalque, M.D. For more history of the words associated with anesthesia, see Sanchez GC. Lexicographic history of "anesthesia." *J Clin Anesth* 8:435-438, 1996. For an introduction to Quistorp and his dissertation, see Defalque RJ, Wright AJ. Quistorp and "anaesthesia" in 1718. *Bull History Anesth* 24(1): 5-8, January 2006

1730 July 12: Josiah Wedgwood was born. The English pottery designer and manufacturer was a major financial supporter of Dr. Thomas Beddoes and his Pneumatic Institute near Bristol. Beddoes and Humphry Davy manufactured and experimented with nitrous oxide there in 1799 and 1800. Wedgwood died in 1795, three years before the institute opened. His son Tom participated in those nitrous oxide experiments and also, along with Davy, conducted an early experiment in photography around 1800. A recent biography is Bryan Dolan's *Wedgwood: The First Tycoon* [2004].



Josiah Wedgwood

1814 July 19: Samuel Colt was born. In the 1830s Colt, calling himself "Professor Coult" or "Doctor Coult", toured the United States giving nitrous oxide demonstrations to raise money to put his revolver prototype into production. Colt died on 10 January 1862.



Samuel Colt

1817 July 12: Henry David Thoreau, American naturalist and author, was born in Concord, Massachusetts. Thoreau moved into his famous cabin on Walden Pond on July 4, 1845. Six years later, Thoreau had what was apparently his only experience with anesthetics. In May, 1851, Thoreau received ether when his dentist removed some teeth. On May 12, Thoreau described the event in his journal. "By taking the ether the other day I was convinced how far asunder a man could be separated from his senses," Thoreau began the lengthy journal entry. "You expand like a seed in the ground. You exist in your roots, like a tree in winter. If you have an inclination to travel, take the ether: you go beyond the farthest star." In the final paragraph of his description, Thoreau seems to undercut his own enthusiasm. "It is not necessary for them to take ether, who in their sane and waking hours are ever translated by thought..." Thoreau died in 1862.



Henry David Thoreau

1819 July 4: "Born in Wilmington, Delaware on July 4, 1819, Dr. Edward R. Squibb settled in Brooklyn in 1851. He founded the Squibb Pharmaceutical Co. in 1858 in a few rented rooms at 149 Furman Street in Brooklyn Heights. His company manufactured medicinal products that were safer, cleaner and more standardized than most of the medications then available. The company's first order was for 18 pounds of chloroform. The firm's specialty was anesthetics, including ether, chloroform, and cocaine. By 1868 the company had outgrown its Furman Street

quarters and eventually had more than 17,000 employees and marketed pharmaceutical products in 136 countries. In 1956 the manufacturing operations were moved from Brooklyn to New Jersey. Edward Robinson Squibb died on October 5, 1900.” [From the Brooklyn *Eagle* July 4, 2008]



Edward R. Squibb, M.D.

[Source: <http://www.findagrave.com/index.html>]

1834 July 25: The great English poet Samuel Taylor Coleridge died of heart disease at age sixty-one. He was born October 21, 1772, in Devonshire. In 1799 Coleridge was one of several notable participants in the first human nitrous oxide experiments in Bristol conducted by Dr. Thomas Beddoes and his research assistant Humphry Davy. Many of these participants, including Coleridge, provided descriptions of their experiences for Davy's massive book on nitrous oxide that was published in 1800.



Samuel Taylor Coleridge

1841 July 17: The first issue of the weekly British humor magazine *Punch* was published. In 1847 and 1848 the magazine, edited by Mark Lemon, published several items related to the newly-discovered anesthetics ether and chloroform. These items, which usually suggested unorthodox uses for the gases, included cartoons and such gems as Percival Leigh's song, "The Blessings of Chloroform." [see Weller RM. *Punch, on anaesthesia. Anaesthesia* 31:1267-1272, 1976] The magazine lasted until 1992, was revived in 1996 and ceased publication again in 2002.

1844 July: William T.G. Morton began using sulphuric ether as an anesthetic in his Boston dental practice. The agent was suggested to him by Dr. Charles A. Jackson.

1865 July 19: Charles Horace Mayo, co-founder of the Mayo Clinic with his brother William J., was born. Charles Mayo is often identified as one of the youngest persons ever to administer anesthesia. He himself claimed to have assisted their surgeon father in such work, beginning around the age of eight or nine with a case for removal of a huge ovarian tumor. William claimed Charles was twelve at the time of that case and left a wonderful description: "When I was sixteen (1877 or 1878) I was my father's first assistant, and Charlie handled the sponges behind me. Dr. Mosse was giving the anesthetic--this was out at the Voltz place--as father got the incision big enough for digging out the tumor, Dr. Mosse fainted away, and Charlie stood on a box and administered ACE [an alcohol, chloroform, and ether mixture]--from that time he was the anesthetist." [from a 1932 interview in the Mayo Foundation Archives] However, recent research has determined that this case actually took place on January 3, 1883, when Charles was seventeen. [See Byer D. Anesthetic administration by a juvenile: stories from a medical family. *Hist Anaesth Soc Proc* 32: 51-52, 2003] The youngest anesthetist may have been the eight year-old granddaughter of the famous Edward Lawrie of chloroform and Hyderabad Commission fame. Mrs. Armstrong told W. S. Sykes that she gave chloroform for her grandfather while he was doing an emergency case. She was eight at the time. She may also have been one of the first female anesthetists. This event would take place at the beginning of the 20th century. [See: Sykes WS. *Essays on the First Hundred Years of Anaesthesia*. Wood Library-Museum, 1982, vol. 3, p. 200]

1868 July: American dental surgeon Thomas Wilberger Evans [1823-1897] brought to England from his home in Paris a single bottle of nitrous oxide compressed into liquid form. English dentist Charles James Fox noted about this event, "I had the pleasure of operating with it at the Dental Hospital of London, Mr. Clover administering the gas; but there the matter ended. Although I have applied to the maker in Paris of this single bottle, I have never been able to get more than an assurance that it would be ready when certain great difficulties were overcome..." That nitrous oxide could be liquefied under great pressure had been discovered by Michael Faraday in 1823. In March, 1868 Evans had also visited England to promote the use of nitrous oxide anesthesia, using a Sprague's apparatus to manufacture the gas and india rubber bags to hold it during administration. This method and equipment had been demonstrated for him in Paris by fellow American dentist Gardner Quincy Colton. Evans' visit ignited great interest in nitrous oxide anesthesia in Great Britain; by 1870, the firms of Barth and Coxeter could supply liquefied nitrous oxide on a large scale. By 1873 the method had reached

America. Evans, who trained in Philadelphia, arrived in Paris in 1847, and built one of the most fashionable dental practices in the city. Emperor Napoleon III and several royal families were among his patients. For details of these events in the history of nitrous oxide anesthesia, see Duncum BM. *The Development of Inhalation Anaesthesia* [Oxford University Press, 1947, pp 279-294].

1868 July 15: William T.G. Morton died in New York City. In October, 1846, Morton made the first successful public demonstrations of ether anesthesia at the Massachusetts General Hospital in Boston. A recent [and massive!] biography is Richard J. Wolfe's *Tarnished Idol: William T.G. Morton and the Introduction of Surgical Anesthesia* [Norman Publishing, 2001].

1876 July 15: J. T. Clover published an article in the *British Medical Journal* in which he introduces the nitrous oxide-ether sequence and an apparatus for its administration.

1893 July 6: French author Guy de Maupassant, born on August 5, 1850, died. In his brief career De Maupassant wrote several novels and hundreds of short stories. He suffered from migraines and self-medicated with ether. In one of his stories, "Afloat", written in 1888, the narrator treats his migraines in the same way. In that story the narrator declares that ether provides "a new way of seeing, judging, appreciating things and life..." De Maupassant is one of many writers and artists who have noted such experiences with anesthetic drugs.

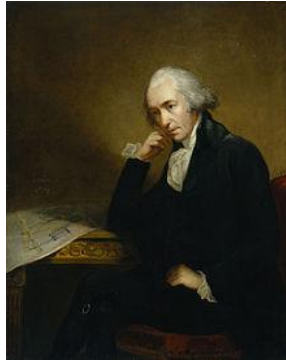
1899 July 21: Ernest Hemingway was born in Oak Park, Illinois. One of the author's best known works is *A Farewell to Arms* [1929], the story of American World War I soldier Frederic and Catherine, the nurse who attends him after an injury. The two fall in love, and Catherine becomes pregnant. The last chapter, like much of the novel, takes place in a hospital and is filled with discussions of pain, unconsciousness and anesthesia related to Catherine's labor. She likes the nitrous oxide she is given for the pains: "I'm a fool about the gas. It's wonderful." Her labor drags on, she gets more and more gas, but finally she acknowledges the gas no longer works, and she has a caesarean. For this and his numerous other works, Hemingway received the Nobel Prize for literature in 1954. He committed suicide at his home in Ketchum, Idaho, on July 2, 1961. [See Herndi DP. Invalid masculinity: silence, hospitals, and anesthesia in *A Farewell to Arms*. *Hemingway Review* 21(1): 38-52, fall 2001]

1900 July: Oskar Kreis published the first account of spinal analgesia for vaginal delivery. [A translation of the German original was published in *International Journal of Obstetric Anesthesia* 9:174-178, 2000]

1936 July 18: General Francisco Franco led an uprising and the Spanish Civil War began. One of the medical advances from the war is related to blood transfusion. Canadian thoracic surgeon Henry Norman Bethune advocated mobile units to transfuse soldiers at the front instead of waiting until they were transported to medical centers behind the lines. For more on Bethune's work in this war, see Franco A, Cortes J, Alvarez J, Diz JC. The development of blood transfusion: the contributions of Norman Bethune in the Spanish Civil War (1936-1939). *Can J Anaesth* 1996;

43: 1076-1078 and Walt AJ. The world's best-known surgeon. *Surgery* 1983; 94: 582-590. Dennis Bock's 2007 novel, *The Communist's Daughter*, is based on the fascinating life of Bethune.

2002 July 19: Barry Reed, a Massachusetts lawyer and novelist, died. Reed's best known novel, *The Verdict* (1980) is the story of down-and-out Boston attorney Frank Galvin who attempts to redeem himself by taking the case of a young woman who is in a coma following anesthetic complications during surgery. The novel was filmed in 1982, with Paul Newman as Galvin.



James Watt

This Month in Anesthesia History: August

1743 August 26: Antoine Laurent Lavoisier was born in Paris. Among his many accomplishments he researched and named oxygen. He was beheaded during the French revolution on May 8, 1794.



Antoine Laurent Lavoisier

Line engraving by Louis Jean Desire Delaistre, after a design by Julien Leopold Boilly

1774 August 12: Robert Southey, future English poet laureate and biographer of Lord Nelson, was born. Southey was also one of numerous famous or soon-to-be famous individuals who participated in the nitrous oxide experiments conducted in 1799 and 1800 by Dr. Thomas Beddoes and Humphry Davy at the Pneumatic Medical Institute in Clifton, just outside Bristol, England.

1809 August 29: American physician and author Oliver Wendell Holmes was born. In 1846 Holmes suggested the word "anaesthesia" for the state of unconsciousness William T.G. Morton induced with ether in patients at the Massachusetts General Hospital.

1819 August 9: William Thomas Green Morton, was born in Charlton City, Massachusetts. In October, 1846, Morton--a dentist--made the first successful "public" demonstration of surgical anesthesia at the Massachusetts General Hospital in Boston. Morton's story is told most recently in a massive biography by Richard Wolfe, *Tarnished Idol: William Thomas Green Morton and the Introduction of Surgical Anesthesia; A Chronicle of the Ether Controversy*. (Norman Publishing, 2001) Morton died on July 15, 1868, in New York City.

1819 August 25: James Watt died near Birmingham, England. Watt, of workable steam engine fame, developed a partnership in the mid-1780s with Thomas Beddoes as Beddoes attempted to market his therapeutic applications of Priestley's "factitious airs" or gases. Watt developed equipment for Beddoes' use; some of this equipment was later used in Bristol during the nitrous oxide experiments of 1799 and 1800. Watt, his wife, and one of his sons, James Jr., participated along with numerous others in those experiments.

1842 August 26: Heinrich Irenaeus Quincke, German internist was born in Frankfurt an der Oder. Among other notable medical achievements, in the early 1890s Quincke introduced lumbar puncture as a diagnostic and therapeutic tool. Quincke died on May 19, 1922.



Heinrich Irenaeus Quincke

1849 August 23: English poet, critic and editor William Ernest Henley was born. As a young man, Henley underwent an operation for a club foot. This experience resulted in a series of poems published as *In Hospital* (1873-75). In one of those poems, "Before", Henley wrote: "Behold me waiting--waiting for the knife./A little while, and at a leap I storm/ The thick, sweet mystery of chloroform,/The drunken dark, the little death-in-life." The complete text of the collection can be found at <http://www.victorianweb.org/authors/henley/inhospital/contents.html> In addition to his own work, Henley wrote several plays with his friend Robert Louis Stevenson. Henley died in 1903.



W.E. Henley

1867 August 25: English chemist and physicist Michael Faraday died. In 1818 Faraday, a student of Humphry Davy, published a brief anonymous article in the *Quarterly Journal of Science and the Arts* in which he noted the lethargic state that could be produced by the inhalation of ether vapor. Faraday is best known for his pioneering experiments in electricity and magnetism. He was born September 22, 1791, at Newington, Surrey, near London. A recent biography is *Michael Faraday* by Geoffrey Cantor et al (1996).



Michael Faraday

1868 August: Joseph Thomas Clover presented his paper "On the Administration of Nitrous Oxide" at the British Medical Association meeting at Oxford.



Joseph T. Clover, M.D., administering chloroform

[Source: <http://www.sciencemuseum.org.uk/broughttolife/techniques/chloroform.aspx>]

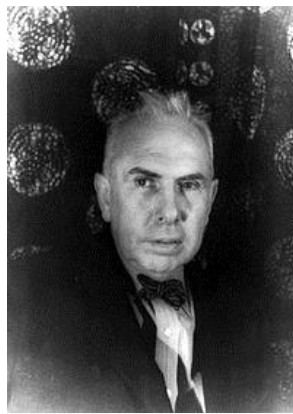
1868 August: Coxeter and Son in England began marketing an apparatus employing a cylinder of gas, a reservoir bag and a Clover face mask.

1869 September 23: American poet Edgar Lee Masters was born. In his classic collection *Spoon River Anthology*, Masters includes the story of "Searcy Foote" who murders his invalid Aunt Persis because she won't let him go away to college: "And a bottle of chloroform on the book,/ She used sometimes for an aching tooth!/ I poured the chloroform on a handkerchief/ And held it to her nose till she died." Foote got away with the crime and inherited his aunt's fortune. Masters died in 1950.



Edgar Lee Masters

1871 August 27: American author Theodore Dreiser was born in Sullivan, Indiana. Dreiser's best known works are probably his novels *Sister Carrie* and *An American Tragedy*. In February 1915 Dreiser published in *Smart Set* magazine his one-act play "Laughing Gas" in which a physician having surgery has a mystical experience while under nitrous oxide anesthesia. [see Wright AJ. Theodore Dreiser's "Laughing Gas." *Anesth Analg* 69:391-392, 1989] Dreiser died on December 28, 1945, in Hollywood, California.



Theodore Dreiser, photographed by Carl Van Vechten, 1933

1875 August 4: Danish author Hans Christian Andersen died in Copenhagen. Andersen was a frequent traveler and kept a diary during his trips. In August, 1847, he visited Edinburgh, Scotland, for several days. Several dinners were arranged by the locals for this famous author, and on the night of August 17 Andersen and numerous others dined at the house of prominent physician James Young Simpson. In his autobiography, Andersen wrote that "...in the large circle which was gathered there several experiments were made with breathing in ether. I thought it distasteful, especially to see ladies in this dreamy intoxication...there was something unpleasant about it, and I said so, recognizing at the same time that it was a

wonderful and blessed invention to use in painful operations..." Simpson did not discover the anesthetic properties of chloroform until November of that year. [See Secher O. Hans Andersen and James Young Simpson. *Br J Anaesth* 44:1212-1216, 1972] Andersen was born in Odense on April 2, 1805.



Hans Christian Andersen
Photograph taken by Thora Hallager, 1869

1897 August 10: On this date a thirty-year old German chemist, Felix Hoffman, synthesized a batch of acetylsalicylic acid, a combination of salicylic acid and acetyl chloride. Salicylic acid occurs in the bark of certain willow trees and has been known as an analgesic since at least the first century A.D. In 1838 salicylic acid was isolated, but alone produces stomach pain and in large doses gastrointestinal bleeding. A French scientist combined it with acetyl chloride in 1853 to produce a less irritating analgesic, but his discovery was forgotten until Hoffman's work. Hoffman's employer, the Bayer Company, quickly began to market the drug as Aspirin.

1898 August 10: Gardner Quincy Colton died in Geneva, Switzerland.

1898 August 16: Surgeon August Bier of Greifswald, Germany, administered the first spinal anesthetic, a solution of cocaine, in a human, his assistant Hildebrandt. Bier had previously tried the technique successfully in animals. Soon Bier used the technique in patients. [See Goerig M, Agarwal K, Schulte am Esch J. The versatile August Bier (1861-1949), father of spinal anesthesia. *J Clin Anesth*. 2000 Nov;12(7):561-9 AND Van Zundert A, Goerig M. August Bier 1861-1949. A tribute to a great surgeon who contributed much to the development of modern anesthesia on the 50th anniversary of his death. *Reg Anesth Pain Med*. 2000 Jan-Feb;25(1):26-33]

1898 August 29: Author and film director Preston Sturges was born in Chicago, Illinois. Sturges became well-known for such films as *The Great McGinty* [1940] and *Sullivan's Travels* [1942]. Sturges also wrote and directed *The Great Moment* [1944], based on the life of William T.G.

Morton, and the only Hollywood feature film ever made about the history of anesthesia. . Morton was played by Joel McCrea, who had also starred in *Sullivan's Travels*. Sturges died in New York City on August 6, 1959. [See Heynick F. William T.G. Morton and "The Great Moment". *J Hist Dent*. 2003 Mar;51(1):27-35.]

1899 August 9: Author Pamela Lyndon Travers was born [as Helen Lyndon Goff] in Maryborough, Queensland, Australia. She wrote as P.L. Travers and her best-known work is *Mary Poppins* [1934], the first of 11 books featuring the character. The Disney film version was released on August 29, 1964. One chapter from the book, "Laughing Gas," set at Uncle Albert Wigg's birthday party, was filmed for the movie and almost removed by Walt Disney. However, after numerous viewings of the scene featuring raucous laughter by actors Julie Andrews, Dick Van Dyke and Ed Wynn, Disney allowed it to remain in the finished film. The chapter was published individually as *Mr. Wigg's Birthday Party* in the Little Golden Books series in 1952. P.L. Travers died on April 23, 1996.



P.L. Travers, appearing in the role of Titania in *A Midsummer Night's Dream*

1910 August 26: American psychologist William James died. Among his many other accomplishments, James self-experimented with nitrous oxide inhalation and left a brief but vivid description of his experience. James was also a long-time supporter of the philosophy Benjamin Paul Blood described in his work *The Anaesthetic Revelation* [1874].

1935 August 15: American humorist and author Will Rogers died. Rogers was born on November 4, 1879, in Indian Territory [what is now Oklahoma]. Rogers had a long career on stage, radio and in films; he also wrote some 4,000 syndicated newspaper columns and six books. He was especially known for his political humor. Among his books is *Ether & Me...or Just Relax* [1937, reprinted in 1973], a humorous account of a visit to the dentist. Along with famed

pilot Wiley Post, Rogers died in a plane crash near Point Barrow, Alaska. Learn more about Rogers at <http://www.cmgww.com/historic/rogers/index.php>

1935 August 17: Feminist author Charlotte Perkins Gilman committed suicide in Pasadena, California. In the note she left behind, Perkins [who was a prolific author of both fiction and non-fiction] said she "chose chloroform over [breast] cancer" pain. The use of chloroform by suicides was apparently wide-spread for several decades in the late nineteenth and early twentieth centuries. Tom Roberts, the father of Mary Roberts Rinehart—one of the most successful American writers of the first half of the twentieth century—committed suicide in 1895 with chloroform, assisted by a gunshot through the heart. A search of the New York *Times* archive for the period produces dozens of articles with titles like "Suicide by Chloroform", "Suicide Uses Chloroform" and also "Nurse Commits Suicide" [by placing her head in a pan of chloroform!]. No doubt other newspapers around the country were also filled with such sad cases. A very odd account appeared in the New York *Times* on March 1, 1905: "Suicide Agreed with Osler; Old Man in St. Louis Chloroformed Himself After Reading Lecture." The gentleman had apparently taken seriously William Osler's notorious, tongue-in-cheek lecture remark the previous month that men [but not women!] over the age of sixty were useless and should seek "peaceful departure by chloroform." His remarks had been widely reported—and condemned—in the national press. [See Johnson JA. Osler recommends chloroform at sixty. *Pharos* 59: 24-26, 1996]



Charlotte Perkins Gilman

1937 August 11: Novelist Edith Wharton died in France. Among her numerous novels is *Twilight Sleep* [1927], a satirical portrait of the wealthy during the Jazz Age of the 1920s. The novel includes scenes of the administration of scopolamine for pain relief during childbirth, a popular method of the day called "twilight sleep." Wharton was born January 24, 1862, in New York City.

1955 August 21: Noel Alexander Gillespie, died of a heart attack in Madison, WI at the age of 50. Emily Rieder, Noel's mother, befriended T. E. Lawrence while she was a teacher at the American Mission School in Jabail, Syria. Lawrence suggested books for Noel to read and advised Emily about Noel's education. Gillespie took a leave of absence from his studies as an Oxford undergraduate and traveled to Lambarene with Albert Schweitzer in 1924. He received a D. M. degree from Oxford based on the first thesis concerning anesthesia, "Endotracheal Nitrous Oxide-Oxygen-Ether Anaesthesia in Neurological Surgery." He trained in anaesthetics at London Hospital and later was elected to the consultant staff. Gillespie invented the Shadwell Laryngoscope in 1936, named after the pediatric hospital where he was working with the plastic surgeon, T. P. Kilner. In 1935 Noel visited prominent American anesthetists during a three month tour. He spent two weeks in Madison, Wisconsin with Ralph Waters. The next year Gillespie hosted the Waters family during their trip to England. During this trip Waters spoke on cyclopropane to the British Medical Association meeting in Oxford in July and on carbon dioxide absorption to the Anaesthetic Section of the Royal Society of Medicine in October. Gillespie left his practice at the London Hospital and joined Waters at the University of Wisconsin in May 1939. He wrote his classic monograph, *Endotracheal Anaesthesia*, (University of Wisconsin Press, 1941) while in Madison. [Entry written by Mark Schroeder, M.D.]

1970 August: Drs. H.J.C. Swan and William Ganz of Los Angeles introduced the pulmonary artery catheter into clinical practice.

1974: August 7: Virginia Apgar, obstetric anesthesiologist who developed the famous scoring system for evaluating newborns, died in New York City.

1989 August 28: Sir Robert Reynolds Macintosh died after head injuries sustained during a fall. Although born in New Zealand in 1897, Sir Robert moved to England at the start of World War I and that remained his home. In February 1943 he published an article in *Lancet* about the laryngoscope blade that bears his name. He published four books on regional anesthesia between the late 1940s and early 1950s. After World War II he devoted much effort to improving anesthetic practice in developing countries. [see Boulton TB. Professor Sir Robert Macintosh, 1897-1989: personal reflections on a remarkable man and his career. *Reg Anesth* 18:145-154, 1993]

2008 August 11: Dr. Leslie Rendell-Baker died in Redlands, California. Dr. Rendell-Baker was born in St. Helens, Lancashire, England, on March 27, 1917. He received his M.D. from Guy's Hospital Medical School in London in 1941 and entered the Royal Army Medical Corps the following year. After training in Scotland, Dr. Rendell-Baker and his medical team landed at Queen Red Beach on D-Day; he continued to serve in Europe until Christmas, 1946. After the war he trained in anesthesia at Guy's Hospital and then settled permanently in the U.S. in 1957. He spent several years at Western Reserve University Hospital in Cleveland, and then served as Chair of the Anesthesiology Department at Mount Sinai Hospital and Medical School in NYC from 1962 until 1979. He then moved to California where he held a post at the VA Hospital in

Loma Linda until his retirement in 1998. Dr. Rendell-Baker co-authored three anesthesia textbooks, 11 book chapters and numerous journal articles. In the 1960s he and dental surgeon Dr. Donald Soucek developed a face mask for use in children that became a world-wide standard. That device is described in Dr. Rendell-Baker's entry in *Notable Names in Anaesthesia* [J. Roger Maltby, ed., 2002, pp. 173-175] During his later years, Dr. Rendell-Baker pursued an interest in the history of his specialty.



John Snow, M.D.

This Month in Anesthesia History: September

1637 September 8: Robert Fludd, an English physician, philosopher and inventor, died. Fludd was one of the earliest physicians to time the pulse.

1677 September 7 [or 17]: Englishman Stephen Hales was born in Bekesbourne, Kent. While a divinity student at Cambridge, he studied botany and chemistry. Hales, who became Vicar of Teddington in 1709, was the first to measure blood flow, blood volume and blood pressure. He reported the results in *Statical Essays*. Hales also researched the role of air and water in plant and animal life, and developed a ventilator that saved lives aboard ships, and in hospitals and prisons. He demonstrated that the spinal cord mediates some reflexes and invented the surgical forceps. In 1717 he was elected a fellow of the Royal Society and was awarded its Copley Medal in 1739. You can learn more about this fascinating man in I.B. Smith's article, "The impact of Stephen Hales on medicine" published in the *Journal of the Royal Society of Medicine* in 1993 [86: 349-352]. Hales died in Teddington on January 4, 1761.



Stephen Hales

1791 September 22: English chemist and physicist Michael Faraday was born at Newington, Surrey, near London. In 1818 Faraday, then a student of Humphry Davy at the Royal Institution

in London, published a brief anonymous article in the *Quarterly Journal of Science and the Arts* in which he noted the lethargic state that could be produced by the inhalation of ether vapor. Faraday is best known for his pioneering experiments in electricity and magnetism. He died on August 25, 1867. Recent biographies are *Michael Faraday* by Geoffrey Cantor et al (1996) and *A Life of Discovery : Michael Faraday, Giant of the Scientific Revolution* by James Hamilton (2004).



Michael Faraday

1792 September 27: English caricaturist George Cruikshank was born. In his long career Cruikshank provided illustrations for hundreds of popular books, including John Scoffern's *Chemistry No Mystery* [1839]. The frontispiece for this title (and the only illustration in the book) depicts the effects of nitrous oxide inhalation at a classroom demonstration. Scoffern's otherwise serious chemistry text contains an entire chapter devoted to such a demonstration. Cruikshank also did several famous caricatures related to pain. Cruikshank, who produced more than 15,000 drawings during his long career, died in 1878.

1811 September 30: On this date English novelist and diarist Fanny Burney underwent a mastectomy for suspected breast cancer; she refused any drugs or alcohol except a wine cordial. One of Burney's best known works is *Evelina, or The History of A Young Lady's Entrance into the World*, her first novel published anonymously in 1778. When her authorship of the popular novel became known, Burney's fame was assured. In 1802 Burney and her family moved to France, where they remained for ten years. Between March and May 1812, Burney wrote a detailed letter describing her experience of surgery without anesthesia. The letter, along with the doctors' report written on October 1, 1811, can be found in Hemlow J, et al, eds., *The Journals and Letters of Fanny Burney (Madame d'Arblay)* (Oxford at the Clarendon Press, 1975, Vol. VI, pp. 596-616). Burney, who was born June 13, 1752, died on January 6, 1840.

1818 September 26: English obstetrician and physiologist James Blundell was the first to transfuse human blood into another human. Earlier efforts at transfusion had used animal blood. Although the patient in this initial attempt died, Blundell continued his efforts in a total of ten patients, five of whom survived. Blundell published a physiology and pathology text in 1824 and books on obstetrics [1834] and diseases in women [1837]. An article about his transfusion work is Myhre BA. James Blundell--pioneer transfusionist. *Transfusion* 35:74-78, 1995; an article about his entire professional career is Young JH. James Blundell (1790-1878): Experimental physiologist and obstetrician. *Medical History* 8:159-169, 1964.

1832 September 1: Ephraim Cutter, American physician and inventor of the laryngoscope, was born. Cutter died in New York on April 25, 1917. In its brief obituary, the *British Medical Journal* noted that "He was one of the early American laryngologists, and invented many instruments." He received his undergraduate degree from Yale in 1852 and medical degree from Harvard in 1856. On a visit to Europe in 1862, Cutter met the German physiologist Johann N. Czermak and viewed the photograph Czermak had made of his own larynx. In November 1865 Cutter spent a week testing apparatus and methods with photographer F. Willard Hardy as he photographed Cutter's larynx. In addition to this work and his many instrument designs, Cutter was a prolific author of medical papers on many topics and a pioneer of microphotography. An 1867 paper in the *Boston Medical and Surgical Journal* [now the *New England Journal of Medicine*] was entitled "On the modes of administration of systemic anaesthetics."

1846 September 7: Gilbert Abbott consulted Boston surgeon John Collins Warren about a tumor on his neck. Surgery was scheduled for October 13 at Massachusetts General Hospital.

1846 September 30: Boston dentist William Thomas Green Morton anesthetized his patient Eben H. Frost and successfully removed an ulcerated tooth. Frost had requested that Morton mesmerize (hypnotize) him, but the dentist--who had been searching for a pain-relieving agent--tried sulfuric ether instead. Morton's mentor, Harvard professor Charles Thomas Jackson, had suggested sulfuric ether. This event served as prelude to Morton's successful ether anesthesia for surgery at the Massachusetts General Hospital on October 16 and 17. See Haridas RP. Ebenezer Hopkins Frost. *Anesthesiology*. 2012 Aug;117(2):442-5 and Levasseur R, Desai SP. Ebenezer Hopkins Frost (1824-1866): William T.G. Morton's First Identified Patient and Why He Was Invited to the Ether Demonstration of October 16, 1846. *Anesthesiology*. 2012 Aug;117(2):238-42.

1849 September 1: Outbreak of the Broad Street pump cholera epidemic in London began. This epidemic would be investigated by the great anesthetist John Snow. A recent biography of Snow is Vinten-Johansen P, et al, *Cholera, Chloroform, and the Science of Medicine: A Life of John Snow* [Oxford University Press, 2003].



John Snow, M.D.

1852 September 23: American surgeon William Stewart Halsted was born in New York City. See note for September 7, 1922, below.

1854 September 20: The Crimean War began with a Franco-British victory over Russian forces in the Battle of Alma. This war "was the first major conflict in which anesthesia was used extensively on the battlefield." [For an overview of early military uses of anesthesia, see Houghton IT. Some observations on early military anaesthesia. *Anaesth Intens Care* 34, suppl 1: 6-15, June 2006] Chloroform was widely used by both British and Russian forces.

1866 September 21: Author Herbert George Wells was born in Bromley, England. Wells wrote *The Time Machine* [1895], *War of the Worlds* [1898] and other classic novels as well as many short stories, essays, and non-fiction works. In his story "Under the Knife," first included in a collection published in 1897, the narrator undergoes an operation at home. While under chloroform anesthesia, he has a near-death experience. "I do not think I saw. I do not think I heard; but I perceived all that was going on, and it was as if I both heard and saw. Haddon was bending over me, Mowbray behind me; the scalpel...was cutting my flesh..." Wells died on August 13, 1946.



H. G. Wells

1869 September 17: Physician and famed thesaurus-maker Peter Mark Roget died. In 1799

Roget, just out of medical school, worked in Humphry Davy's laboratory at the Pneumatic Institute in Clifton, England, where Davy, Dr. Thomas Beddoes, and many others were researching nitrous oxide. Among Roget's many publications was the biographical entry on Beddoes in an early edition of the *Encyclopedia Britannica*. Roget was born on January 18, 1779, in London.

1873 September 8: French author Alfred Jarry was born; his family background included both nobility and insanity. At age 23 his play "Ubu Roi" premiered in Paris; its scandalous nature caused a riot. The outrageousness of that play and Jarry's other writings make him seem the godfather of much 20th century art--from Surrealism to the Marx Brothers and Monty Python. Jarry died of tuberculosis in 1907, after years of addiction to opium, absinthe and ether.

1884 September 15: A colleague of Dr. Carl Koller's reported to the Heidelberg Congress of Ophthalmology Koller's successful use of cocaine as a local anesthetic.

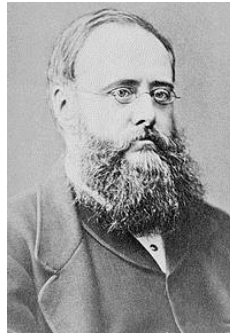
1888 September 26: Poet and playwright Thomas Stearns Eliot was born in St. Louis. One of the great English-language poems of the twentieth-century, Eliot's "The Love Song of J. Alfred Prufrock," was first published in *Poetry* magazine in June 1915. Eliot had actually completed the poem several years earlier. This portrait of modern spiritual and emotional paralysis opens with the lines "Let us go then, you and I,/When the evening is spread out against the sky/Like a patient etherized upon a table..." The month after its publication, Eliot married Vivien Haigh-Wood, who later became addicted to ether; she died in 1945. Their relationship is depicted in the 1994 film *Tom and Viv*. Eliot moved to London in 1915, where he died in 1965. Among his other many famous works is the long poem *The Waste Land*. Eliot won the Nobel Prize for literature in 1948.



T. S. Eliot, 1934

1889 September 23: English author Wilkie Collins died. Collins wrote such classic novels as *The Woman in White* [1860] and *The Moonstone* [1868]. Some of his works, including *Man and*

Wife and *The Haunted Hotel*, feature non-medical uses of chloroform. Collins was born on January 8, 1824.



Wilkie Collins

1921 September 15: Gordon Stanley Ostlere, English surgeon and anesthesiologist, was born. Under the penname Richard Gordon, Dr. Ostlere has written, among other novels, the humorous "Doctor in the House" series of books that have spawned films and television and radio series in Britain. Under his own name he has published *Anaesthetics for Medical Students* in 1949; the tenth edition appeared as Ostlere and Bryce-Smith's *Anaesthetics for Medical Students* in 1989. Dr. Ostlere also authored *Anaesthetics and the Patient* (1949) and *Trichlorethylene Anaesthesia* (1953).

1922 September 7: American surgeon William Stewart Halsted died in Baltimore, Maryland. Halsted was one of the founders of Johns Hopkins Medical School, and the first pair of rubber surgical gloves were made under his direction by the Goodyear Rubber Company. He also pioneered many surgical techniques, studied hemostasis and wound healing, and contributed many articles to the medical literature. Along with William H. Welch, William Osler, and Howard Kelly, Halsted is one of "The Four Doctors" in John Singer Sargent's famous 1905 painting. Halsted was one of the first American surgeons to research cocaine as a local anesthetic and his self-experimentation led to addiction. He was born on September 23, 1852, in New York City. A recent article about Halsted is Markel H. The accidental addict. *N Engl J Med*. 2005 Mar 10;352(10):966-8.

1939 September 23: Sigmund Freud died in London at age 83. In the mid-1880s Freud and Carl Koller [see 1884 September 15] studied the physiological effects of cocaine.

1941 September: Thomas Keys, librarian at the Mayo Clinic, began publication of a series of five articles entitled "The Development of Anesthesiology" in the journal *Anesthesiology* (2:552-574, Sept 1941). This series eventually resulted in Keys' classic book, *The History of Surgical Anesthesia*, first published in 1945 and still in print today. Keys was born in 1902 in Greenville, Mississippi. He graduated from the University of Chicago's Graduate Library School in 1934 and immediately went to work at the Mayo Clinic library. He remained there in various capacities until his retirement in 1972. He

authored or co-authored numerous papers related to various aspects of the history of medicine. Keys died in 1995; an obituary can be found in *Bull Med Libr Assoc* 85(2): 219-220, April 1997 which is [here](#).

1952 September 21: At a medical meeting Dr. Virginia Apgar made the first formal presentation of her newborn scoring system.

1955 September 10: The television western series *Gunsmoke* premiered on the CBS network. The program lasted until March 1975 and produced 635 episodes. A radio version ran from 1952 until 1961. Since one of the regular characters was a physician, Galen "Doc" Adams, a number of shows featured medical topics. In "Doctor's Wife", for instance, Doc Adams and a new physician in town have a spirited debate over the value of Joseph Lister's use of carbolic acid spray to fight wound sepsis in surgery. Several episodes have some connection to anesthesia. "Laughing Gas" [which also appeared in a radio version] features a former gunfighter whose medicine show includes demonstrations of nitrous oxide inhalation. In "Gold Train: The Bullet" Sheriff Matt Dillon is attacked and wounded with a bullet near his spine. Although at first reluctant, Doc finally decides to operate with saloon owner Kitty Russell as his anesthetist. She is seen dripping the anesthetic liquid from a small bottle onto a mask over Matt's face before Doc begins surgery. "Miss Kitty" also serves as anesthetist in a surgery scene in "The Pillagers". She and Dr. Newly O'Brien are prisoners of an outlaw gang hiding out in an abandoned mine. One shot in the scene shows Kitty using a wire frame mask with gauze and pouring anesthetic from a can.



The cast of *Gunsmoke*
CBS-TV 1955-1975

Source: <http://tnwordsmith.blogspot.com/2012/06/gunsmoke-journal-1-dodge-city-and-me.html>



John Collins Warren, M.D. , ca. 1850

This Month in Anesthesia History: October

1632 October 20: Christopher Wren was born in London. Around 1660 the English architect and astronomer began to experiment with the transfusion of blood between animals and intravenous injections into animals. An account of his work was published in the *Philosophical Transactions of the Royal Society of London* in 1665. Wren, the greatest English architect of his time who designed many of London's cathedrals, died in that city in February, 1723. A much earlier attempt at blood transfusion was described by Stefano Infessura [ca. 1435-1500], an anti-papist lawyer in Rome. According to Infessura's *Diary of the City of Rome*, when Pope Innocent VIII was on his deathbed, a Jewish physician suggested infusing blood from three ten year-old boys into the pontiff's veins. All three donors died and Innocent himself died on July 25, 1492. The *Catholic Encyclopedia* warns that Infessura's work is full of gossip and not to be trusted.

1708 October 16: Swiss scientist and writer Albrecht von Haller, father of experimental physiology, was born. He graduated from medical school in Leiden at age 19 and returned to Bern where he lectured on anatomy and wrote poetry. His research on the irritability or contractility of muscle tissue was published in 1732 as *A Dissertation on the Sensible and Irritable Parts of Animals*. In 1736 he was appointed professor of anatomy at the University of Gottingen's medical school, where he spent 17 years. In 1753 he returned again to Bern, where he died in 1777. Haller published numerous other works, including bibliographies on anatomy, surgery, botany and medicine and a very popular collection of poems. A brief review of his life is available [here](#).

1760 October 23: Japanese physician Hanaoka Seishu was born in Hirayama. In October 1805 Seishu performed an operation for breast cancer using "tsusensan" as an anesthetic. The research behind this event is portrayed in Sawako Ariyoshi's novel *The Doctor's Wife*. Seishu died on October 2, 1835.

1772 October 21: English poet Samuel Taylor Coleridge was born. In 1799 Coleridge participated in the nitrous oxide experiments being conducted by Dr. Thomas Beddoes and his research assistant Humphry Davy at the Pneumatic Institute in Clifton, just outside Bristol.

Coleridge and other luminaries involved left written accounts published in Davy's great work on nitrous oxide which appeared in the summer of 1800. The enthusiasm for "laughing gas" inhalation by Coleridge, Davy, and fellow poet Robert Southey is depicted in the recent British film *Pandaemonium*.



Coleridge in 1795.

1805 October 13: Japanese physician Hanaoka Seishu [1760-1835] performed an operation for breast cancer using "tsusensan" as an oral general anesthetic on a patient named Kan Aiya. The research behind this event is portrayed in Sawako Ariyoshi's novel *The Doctor's Wife*. [See also Ogata T. Seishu Hanaoka and his anaesthesiology and surgery. *Anaesthesia* 28:645-652, 1973] Seishu left case records of more than 150 breast cancer patients.

1835 October 2: Japanese physician Hanaoka Seishu died. See entries above for 13 October 1805 and 23 October 1760.

1846 October 16: On this Friday morning, Boston dentist William Thomas Green Morton appeared in the operating theater of the Massachusetts General Hospital. Morton was running late, but surgeon John Collins Warren had not yet started the removal of a tumor from Gilbert Abbot's jaw. For about three minutes Abbot breathed ether vapor from Morton's simple apparatus—the last minute adjusting of which had been the source of his delay--and "sank into a state of insensibility," Warren noted later. The first public demonstration of ether anesthesia had begun and proved successful.



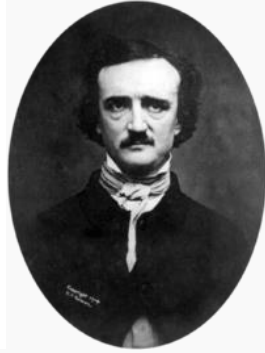
John Collins Warren, M.D., ca. 1850

Abbot "did not experience pain at the time, although aware that the operation was proceeding," Warren wrote in his 1848 account of the event. The great surgeon is supposed to have declared, "Gentlemen, this is no humbug." The next day another MGH surgeon, George Hayward, removed a large tumor from a woman's arm while she was under the influence of the "Letheon," as Morton called it; for several weeks he did not reveal the nature of his anesthetic agent since he hoped to patent it. [Source: Keys TE. *History of Surgical Anesthesia*. Huntington, New York: Krieger, 1978, pp27-29]

1846 October 17: At the Massachusetts General Hospital surgeon George Hayward removed a large tumor from the arm of a female patient anesthetized with ether. This operation is the second successful public demonstration of Morton's "Lethon."

1848 October 19: Samuel Guthrie, American chemist who discovered chloroform about the same time as Europeans Soubeiran and Justus Liebig, died.

1849 October 7: American writer Edgar Allen Poe died in Baltimore. Lesser-known among his works are three tales dealing with mesmerism, or what we now know as hypnotism. Mesmerism was developed in the late eighteenth-century by Viennese physician Franz Anton Mesmer [1734-1816] and for decades was associated with quackery. However, several physicians in the 1830s and 1840s in England and India used and promoted it as surgical pain relief until the introduction of ether by Morton. Poe's stories featuring mesmerism are "A Tale of the Ragged Mountains," "The Facts in the Case of M. Valdemar" and "Mesmerism Revelation." One recent history of mesmerism is Alison Winter's *Mesmerized: Powers of Mind in Victorian Britain* [1998]. Poe was born January 19, 1809.



1848 "Ultima Thule" daguerreotype of Poe

1854 October 16: Irish writer Oscar Wilde was born in Dublin. The author of such iconic novels and plays as *The Picture of Dorian Gray* and *The Importance of Being Earnest*, Wilde today is also remembered for his pithy, often hilarious observations about human nature and behavior. His mother Jane was also a writer and his father William was a prominent physician whose vast professional achievements, like Oscar's, were tainted by scandal in his lifetime. [Defalque RJ, Wright AJ. Travers vs. Wilde and other: chloroform acquitted. *Bull Anesthesia History* 23(4): 1, 4-7, October 2005]. Father and son also had minor connections to the history of anesthesia. In his 1898 article "Consciousness under nitrous oxide," American philosopher William James quoted an anonymous letter widely believed to be written by Wilde. In it Wilde described the mystical insights he had during a dental anesthetic. "My God! I knew everything! A vast inrush of obvious and absolutely satisfying solutions to all possible problems overwhelmed my entire being, and an all embracing unification of hitherto contending and apparently diverse aspects of truth took possession of my soul by force..." [See James W. Consciousness under nitrous oxide. *Psychol Rev* 5:194-196, 1898] Wilde died in Paris on November 30, 1900.



Photograph taken in 1882 by Napoleon Sarony

1881 October 15: English author Pelham Grenville Wodehouse was born in Surrey. As P. G. Wodehouse he published 96 humorous novels and collections of stories before his death on February 14, 1975. Many of the novels feature the wealthy Bertie Wooster and his valet Jeeves. One of his other novels, *Laughing Gas* (1936) tells the story of the Earl of Havershot, who exchanges identities with a child movie star after inhaling nitrous oxide in a dentist's office. Since 1936 the novel has been reprinted numerous times, translated into Italian, Japanese and Spanish, and remains in print today.



P.G. Wodehouse in 1904 age 23

1883 October 9: Ralph M. Waters was born. Dr. Waters' achievements during a long career at the University of Wisconsin make him the father of academic anesthesia in the United States. Dr. Waters died in 1979. For more information see Lucien E. Morris, Mark E. Schroeder, Mary E. Warner, eds. *A Celebration of 75 Years Honoring Ralph Milton Waters, M.D., Mentor to a Profession*. Wood Library-Museum of Anesthesiology, 2004 [Proceedings of the Ralph M. Waters Symposium on Professionalism in Anesthesiology, Madison , Wisconsin , June 2002]



Ralph M. Waters, M.D.

[Source: <http://www.historyofsurgery.co.uk/Web%20Pages/0472.htm>]

1888 October 17: American genius Thomas Alva Edison applied for his first patent for a device he calls a "Kinetoscope"--what we now know as a motion picture camera. Edison claimed that it would "do for the eye what the phonograph does for the ear." Work on the device by Edison's collaborator William K.L. Dickson had begun soon after the move the previous year into a new laboratory at West Orange , New Jersey . A prototype with the earliest film strips was demonstrated in May, 1891, and Edison 's final patent filed in August of that year. Work on the Kinetoscope was completed in 1892. The following year Edison opened a motion picture studio and by 1894 was opening Kinetoscope viewing parlors in New York and other major cities. Competition from other companies led Edison into numerous legal battles, and by 1918 he had abandoned the motion picture business. However, one of his studio's early films, Dr. Colton, or Dentist Scene, has an important place in anesthesia history. This 1894 film was one of many "actualities" or short, non-fiction films made in the earliest period of motion pictures. A still from the film shows an elderly gentleman, apparently Gardner Quincy Colton, and others in either an actual or recreated dental procedure. If this is indeed Colton, who was born in 1814, he would have been 80 and the film made just four years before his death. In 1844 Colton had begun public nitrous oxide inhalation demonstrations in New England and toured the U.S. in subsequent years—he even came to Mobile, Alabama, in 1848. In 1863 he established the Colton Dental Association and began touring the U.S. and Europe to promote nitrous oxide anesthesia in dentistry. By 1894 Colton was perhaps the best known anesthetist in the world. And the brief film from Edison's studio is probably the first ever made of an anesthetic procedure. Edison died on October 18, 1931, in West Orange, New Jersey, age 84.

1894 October 7: American author and physician Oliver Wendell Holmes died. In addition to his many other achievements, Holmes suggested to William Morton just weeks after Morton's October 1846 public demonstration in Boston that the mental state produced by ether inhalation be called "anaesthesia." The word is derived from an ancient Greek term meaning lack or loss of sensation and had been in circulation in English for over a century when Holmes suggested it be applied to Morton's technique.

1902 October 25: American author Frank Norris died. In his novel *McTeague* [1899], Norris tells the story of a San Francisco dentist. Early in the novel McTeague attacks one of his patients while she is under ether anesthesia.

1939 October 7: American neurosurgeon and medical historian Harvey Cushing died. In 1894 Cushing and fellow Massachusetts General Hospital "house pup" Ernst Amory Codman [1869-1940] developed the first anesthetic record.

1947 October 13: In Britain, two patients, Albert Woolley and Cecil Roe, received spinal anesthesia from the same anaesthetist, Dr. James M. Graham, for relatively minor surgical procedures, and both developed permanent, painful, spastic paraparesis. The men sued Dr. Graham and the Ministry of Health; the case finally went to trial in October, 1953, and lasted eleven days. The plaintiffs lost primarily due to testimony of Sir Robert Macintosh of Oxford University. Despite the outcome, the use of spinal anesthesia in the United Kingdom was

retarded for the next 25 years. Details of the case can be found in Morgan M. The Woolley and Roe case. *Anaesthesia* 50:162-173, 1995.

1980 October: American Society of Post Anesthesia Nurses (ASPA) was incorporated.

1990 October 21: Seven subspecialties were admitted to the ASA House of Delegates.

1994 October 24: Twenty-cent U.S. stamp honoring Virginia Apgar was released at the annual meeting of the American Academy of Pediatrics in Dallas, Texas.



[Source: U.S. Stamp Gallery]

2001 October 11: Betty Jane Bamforth, M.D., died in Madison, Wisconsin.

Dr. Bamforth received her M.D. degree from Boston University in 1947 and after an internship in Boston, finished a residency in anesthesiology at Wisconsin General Hospital in 1951. She was one of the last residents trained by Dr. Ralph Waters, the father of academic anesthesia and the first chair of the University of Wisconsin Anesthesiology Department.

Dr. Bamforth spent three years at the University of Oklahoma, and then returned to Madison in 1954 and remained on the medical school faculty until her retirement in 1992. She served as acting chair of the department from 1969 until 1971, and was thus the first female chair of that department. She also served in various capacities in the medical school. Well-known for her writing and lecturing on anesthesia history, Dr. Bamforth delivered the ASA's Wright Memorial Lecture in 1982 and the Rovenstine Memorial Lecture in 1993. The Rovenstine Lecture is the most prestigious honor given by the ASA; she was the first woman to be so honored.

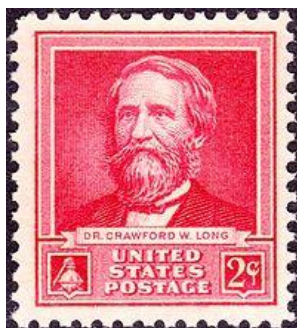
Dr. Bamforth was born on January 20, 1923, in New Britain, Connecticut. [From Dr. Bamforth's obituary, Wisconsin State Journal, October 16, 2001]

2001 October 16: British medical historian Dr. Barbara M. Duncum died. In 1947

Dr. Duncum published *The Development of Inhalation Anaesthesia*, which along with Thomas Keys' *The History of Surgical Anesthesia* is one of the major histories of the specialty. Her book was reprinted in 1994. Dr. Duncum was born February 22, 1910.

2006 October 6: Charles Ronald Stephen, M.D., F.F.A.R.C.S., died. A Montreal native, Dr. Stephen graduated from McGill University medical school in 1940. In his long career he held

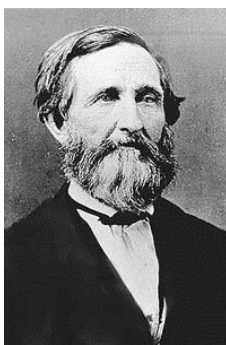
academic anesthesia positions at Duke University, University of Texas Southwestern Medical School and Washington University School of Medicine in St. Louis, from which he retired in 1980. Dr. Stephen was renowned as a teacher and lecturer, and traveled around the world preaching the principles of anesthesiology with a passion that left a lasting impression on all who heard him. The author of more than 160 scientific papers, Dr. Stephen is also the only known anesthesiologist to author books on both pediatric and geriatric anesthesia. He was the founding editor of *Survey of Anesthesiology* and editor of the Anesthesia History Association's newsletter for many years. In 1981, he was awarded the American Society of Anesthesiologists' highest honor, the Distinguished Service Award. Following his retirement, Washington University School of Medicine established the C.R. Stephen Annual Lectureship series which reached its 18th year in 2006.



THIS MONTH IN ANESTHESIA HISTORY: NOVEMBER

1793 November 28: Antoine Lavoisier surrendered to the French revolutionary government. He was imprisoned and executed by guillotine on May 8, 1794. Known as the “father of modern chemistry,” he named oxygen and hydrogen among many other achievements.

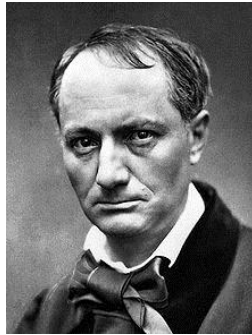
1815 November 1::Crawford W. Long was born in Danielsville, Georgia. On the afternoon of March 30, 1842, in Jefferson, Georgia, Dr. Long removed a small tumor from the neck of James Venable while the patient remained calm after breathing ether vapor. Thus Long performed the first surgical operation under ether anesthesia. Long continued to use ether in several other operations, but failed to report his achievement until after William Morton's public demonstration of ether anesthesia in October, 1846.



Crawford W. Long, M.D.

1821 November 9: French writer Charles Baudelaire was born in Paris . Although probably best known for his poetry collection *LesFleurs du mal* [*Flowers of Evil*, first edition 1857], Baudelaire was also a literary and art critic and beginning in 1848 translated many works of Poe into French. His own dark poetry, often fueled by sessions of hashish smoking, was very controversial during his lifetime. In his essay "Poem of Hashish" [1895], he made some interesting observations about anesthesia: "Despite the admirable services which ether and chloroform have rendered to humanity, it seems to me that from the point of view of the idealist philosophy the same moral stigma is branded on all modern inventions which tend to

diminish human free will and necessary pain. It was not without a certain admiration that I once listened to the paradox of an officer who told me of the cruel operation undergone by a French general at El-Aghouat, and of which, despite chloroform, he died. This general was a very brave man, and even something more: one of those souls to which one naturally applies the term chivalrous. It was not, he said to me, chloroform that he needed, but the eyes of all the army and the music of its bands. That might have saved him. The surgeon did not agree with the officer, but the chaplain would doubtless have admired these sentiments." Baudelaire died in Paris from the ravages of syphilis on August 31, 1867, at age 46.



Charles Baudelaire ca. 1863

1832 November 26: American author Louisa May Alcott was born in Germantown, now a part of Philadelphia, Pennsylvania. She is perhaps best known for her novels *Little Women* and its sequel, *Little Men* [1871]. However, she also published several successful thrillers under the pseudonym A.B. Barnard. Alcott worked as a nurse for six weeks at a Union hospital in Washington, D.C., during the Civil War, and her first significant work, *Hospital Sketches* [1863] resulted from that experience. This book includes descriptions of the brutal treatment of the wounded soldiers of that time; Alcott observes that "the merciful magic of ether" was not always used in surgery. After contracting typhoid pneumonia during this period, Alcott was treated with large doses of calomel, a compound containing mercury. For the rest of her life, until her death on March 6, 1888, the long-term side effects led her to self-medicate with opium and morphine. Opium addiction is explored in some of her later writings, such as *The Marble Woman; or, The Mysterious Model*.



Louisa May Alcott about age 25

1846 November 7: Surgeon George Hayward performed a leg amputation and a lower jaw removal under ether anesthesia at the Massachusetts General Hospital. These surgeries were the third and fourth at which Boston dentist William Thomas Green Morton served as anesthetist.

1846 November 9: Henry J. Bigelow, junior surgeon at the Massachusetts General Hospital, reported on Morton's four successful ether anesthetics at a meeting of the Boston Society for Medical Improvements.

1846 November 12: Letter patent no. 4848 was issued to Charles T. Jackson and William T.G. Morton for 10% of all profits on the use of ether in surgical operations. Because of vociferous opposition from the medical and dental communities to such a patent, Jackson and Morton quickly made their discovery known and freely available.

1846 November 12: The first surgery in private practice under ether anesthesia in Boston took place on this date. J. Mason Warren, son of John Collins Warren, was the surgeon.

1846 November 18: Bigelow's account of Morton's October administrations at Massachusetts General Hospital was published in the *Boston Medical and Surgical Journal*, launching the spread of ether anesthesia around the world.

1846 November 21: In a letter to William T.G. Morton, Oliver Wendell Holmes, Sr., suggested the word "anaesthesia" to describe the mental state produced by the inhalation of ether vapor.



Oliver Wendell Holmes, Sr.

1847 November 8: In Edinburgh, Scotland, James Young Simpson introduced chloroform into clinical practice. The patient was Wilhelmina Carstairs, daughter of a physician.

1856 November 10: At London's King's College Hospital, John Snow made the first clinical administration of amylene, a gas he had extensively investigated in animals. By July, 1857, Snow abandoned use of the gas after two of his patients died. In the summer of 1857 a New York physician, John G. Orton, published two accounts in the *Boston Medical and Surgical Journal* of his use of amylene in a toenail extraction and an obstetric case. Dr. Orton noted that he had obtained the amylene from John Snow. There is a fascinating footnote to the amylene story. In a March 2, 1857, letter, the Paris correspondent of the New York Times reported excitedly on an operation with amylene "for necrosis of the tibia" that he had witnessed. The reporter noted of the patient, "She did not go to sleep, and yet she felt no pain; her eyes remained open during the whole operation, which lasted nearly an hour...." A purified form of amylene, pentane (trimethyl ethylene), gained some popularity in Germany and the United Kingdom until the end of the century.

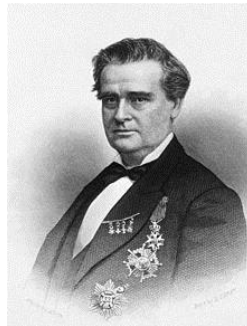
1868 November: Dr. Edmund Andrews published in the *Chicago Medical Examiner* a paper proposing administration of nitrous oxide with oxygen in a premixed combination of 80 to 20 percent.

1879 November 4: American humorist and author Will Rogers was born in Indian Territory [what is now Oklahoma]. Rogers had a long career on stage, radio and in films; he also wrote some 4,000 syndicated newspaper columns and six books. He was especially known for his political humor. Among his books is *Ether & Me...or Just Relax* [1937, reprinted in 1973], a humorous account of a visit to the dentist. Along with famed pilot Wiley Post, Rogers died in a plane crash near Point Barrow, Alaska, on August 15, 1935.



Will Rogers

1883 November 13: James Marion Sims, a surgeon famous for his vesicovaginal operation, died. After Morton's October, 1846, public demonstration of ether anesthesia in Boston, Sims urged Georgia physician Crawford Long to publish an account of operations using ether that Long had performed in 1842. Long's account finally appeared in the December 1849, issue of the *Southern Medical and Surgical Journal*. Sims was born on January 21, 1813, in South Carolina and received his M.D. from Jefferson Medical College in Philadelphia in 1835. For some years he practiced in Montgomery, Alabama, but in 1853 moved to New York where two years later he opened the world's first hospital for women. He served a term as President of the American Medical Association in 1876-77.



James Marion Sims, M.D.

1884 November 15: Vassily von Anrep published the first extensive account of clinical use of cocaine in a Russian journal.

1894 November 30: Ernst Amory Codman [1869-1940] and Harvey Cushing introduced the anesthetic record on or before this date.

1905 November 5: Actor Joel McCrea was born. In addition to numerous other roles, McCrea starred as William T.G. Morton in *The Great Moment* [1944], a film biography directed by Preston Sturges.

2001 November 9: The second annual National Anaesthesia Day is held in Great Britain under the auspices of the Royal College of Anaesthetists. The first celebration was held May 25, 2000.

2005 November 5: British novelist John Fowles died at the age of 79. Well-known for such later novels as *The Magus* and *The French Lieutenant's Woman*, Fowles achieved critical and commercial success early with his first novel, *The Collector* [1963]. That novel tells the story of Frederick Clegg, a meek clerk and butterfly collector who decides to elevate his collecting and kidnaps beautiful art student Miranda Grey as she is walking home from class. Clegg uses a rag soaked in chloroform to subdue her. A film version of the novel appeared in 1965 and featured Terence Stamp as Clegg and Samantha Eggar as Grey. Both novel and film have extended scenes of the criminal use of chloroform. Fowles was born in Leigh-on-Sea, Essex, England, on March 31, 1926. [For more information on such real-life uses of chloroform, see Payne JP. The criminal use of chloroform. *Anaesthesia*. 1998 Jul;53(7):685-90]



Sir Humphry Davy

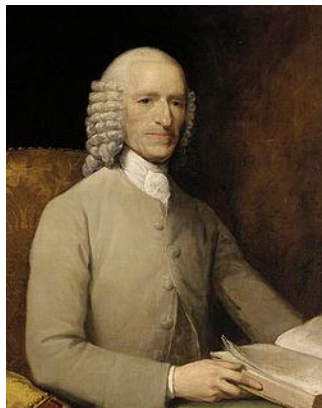
[1830 engraving based on the painting by Sir Thomas Lawrence]

THIS MONTH IN ANESTHESIA HISTORY: DECEMBER

1298 December 24: Theodoric of Lucca, Italian physician and bishop, died. He developed the "soporific sponges" soaked with opium and mandragora, for surgical pain relief. [See Juvin P, Desmonts JM. The ancestors of inhalational anesthesia: the Soporific Sponges (XIth-XVIIth centuries): how a universally recommended medical technique was abruptly discarded. *Anesthesiology*. 2000 Jul;93(1):265-9]

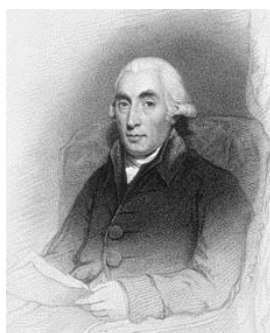
1778 December 17: Humphry Davy was born in Penzance, Cornwall, England. In 1799 in Bristol, England, Davy became the first person to breathe nitrous oxide. In 1800 he published a massive book, *Researches, Chemical and Philosophical, chiefly concerning Nitrous Oxide . . . and its Respiration*, about the laboratory, animal and human experiments on gases that he, Dr. Thomas Beddoes, and numerous others conducted at Beddoes' Pneumatic Medical Institute. In this book he suggested that nitrous oxide could be used to relieve the pain of some surgeries. After moving to London in 1801, Davy's scientific achievements made him one of the luminaries of the age. He discovered several new elements, was a pioneer in the new field of electrochemistry, and lectured before large audiences. One of his best-known achievements was a very practical one--a miner's lamp designed to dissipate the heat of the flame and thus less likely to ignite the methane gas present in mines. Davy became a fellow of the Royal Society in 1803 and served as its president from 1820 to 1827. He was knighted in 1812 and died in 1829.

1780 December 26: English physician John Fothergill died in London. Among many other accomplishments, this devout Quaker was the first to accurately describe migraines, and recognized that hardening of the arteries could cause chest pain. In 1744 he published an account of mouth-to-mouth resuscitation to revive the apparently dead. Fothergill was also the first to recognize the symptoms of diphtheria and maintained an extensive botanical garden near Stratford which contained plants from all over the world. Fothergill was born on March 8, 1712, in Wensleydale, Yorkshire.



John Fothergill, M.D. by Gilbert Stuart

1799 December 6: The great Scottish chemist Joseph Black, who isolated carbon dioxide, died. Among numerous others, Black taught Thomas Beddoes when the latter was a medical student at the University of Edinburgh in the 1780s. At the time of his death Black and James Watt were duplicating in Birmingham Beddoes and Davy's work with nitrous oxide in Bristol.



Mezzotint engraving of Joseph Black by James Heath after Sir Henry Raeburn

1808 December 24: Dr. Thomas Beddoes died. He received his M.D. from Oxford in 1786. In the late 1780s Dr. Beddoes began attempts to implement Joseph Priestley's idea for the therapeutic applications of "factitious airs" or gases. By 1798 Beddoes had established the Pneumatic Institute in Clifton, England, and hired the teenage Humphry Davy as Research Director. Their experiments with nitrous oxide and many other gases began the following year. His *Notice of Some Observations made at the Medical Pneumatic Institution* (1799) is the first substantial publication about human respiration of nitrous oxide. Among numerous other medical and political works, Beddoes authored the classic *Observations on the Nature of Demonstrative Evidence* [1793], the first work in English to discuss the great German

philosopher Immanuel Kant's *Critique of Pure Reason*. Beddoes was born at Shifnal, Shropshire, England, on April 13, 1760.



Thomas Beddoes, M.D.

1844 December 10: Dentist Horace Wells attended a demonstration of nitrous oxide inhalation at Union Hall in Hartford, Connecticut. At this exhibition by Gardner Quincy Colton, Wells conceived the notion of pain relief by gas inhalation, and thus rediscovered an idea Humphry Davy expressed over four decades earlier. However, Wells quickly put the idea into practice. Later in the century Colton single-handedly revived interest in nitrous oxide for dentistry.

1844 December 11: Colton administered nitrous oxide to Wells while another dentist, Dr. John M. Riggs, extracted one of Wells' teeth. This event is thus the first dental use of nitrous oxide.

1846 December 15: Ether anesthesia was first administered in Paris, France. The anesthetic was given by Francis Willis Fisher [1821-1877], a young physician from Boston, for the excision by the French surgeon Jobert of a large cancer on the lower lip of a 59 year-old man. The surgery was performed at St. Louis Hospital. In January 1847 Fisher administered successful anesthesia for cases of two other French surgeons, A. Velpeau and P.J. Roux. Fisher, an 1845 graduate of Harvard Medical School, lived in Paris from about November 1846 through February 1847. His account of the first Parisian ether anesthetic was published in the *Boston Medical and Surgical Journal* in 1847 as "The Ether Inhalation in Paris." [36:109-113].

1846 December 19: English dentist James Robinson administered ether for removal of a diseased molar tooth from a young female patient.

1846 December 21: The first surgical anesthetic with ether is administered in England by William Squire during surgery by Robert Liston. Liston may have given ether to Squire's assistant on either the 19th or 20th as he, William and Peter Squire worked on suitable equipment and technique.

1847 December 7: Robert Liston, first surgeon in England to use ether, died.

1849 December: Crawford Long finally published an account of his 1842 administrations of ether anesthesia in the *Southern Medical and Surgical Journal*.

1857 December 3: Carl Koller was born. In the early 1880s he was a house surgeon at the Vienna General Hospital and along with his friend Sigmund Freud studied the physiological effects of cocaine. Freud eventually lost interest, but Koller continued the research and in 1884 discovered the local anesthetic properties of the drug when he injected a weak solution of cocaine into the eye of a frog. Koller died in 1944.



Carl Koller

1868 December: A committee formed in April by the Odontological Society of Great Britain and the Committee of Management of the Dental Hospital of London to investigate nitrous oxide made its first report. The report recommended the elimination of air inhalation during nitrous oxide administration but also stresses the potential dangers of this method.

1887 December 1: Sherlock Holmes first appears in print in Arthur Conan Doyle's novel *A Study in Scarlet*, first published in *Beeton's Christmas Annual*. [see Maltby JR. Sherlock Holmes and anaesthesia. *Can J Anaesth* 35:58-62, 1988 and Bergman NA. Sherlock Holmes and his gasogene. *Pharos* 58(3): 35-37, summer 1995]



Arthur Conan Doyle

1896 December 10: Alfred Jarry's legendary avant-garde play *Ubu Roi* opens and closes in Paris. Jarry's play was so scandalous that the audience rioted for fifteen minutes; the

spectacle made the young writer famous His other prose and theatrical works also enraged tender French sensibilities, but his work has influenced such artistic movements as Dadaism, Cubism and Surrealism and artists ranging from Picasso to the Marx Brothers and Monty Python. Born in 1873, Jarry was addicted to absinthe and substituted ether sniffing when he could not afford his favorite drink. He died in 1907 at aged 34.



Alfred Jarry

1901 December 17: Janet G. Travell, a pioneer in the treatment of myofascial pain, is born in New York City. She was co-author of the two-volume classic *Myofascial Pain and Dysfunction: The Trigger Point Manual*. From 1961 to 1963 she served as personal physician to President John F. Kennedy. Dr. Travell died in 1997. You can read more about her in Wilson VP. Janet G. Travell, MD: A Daughter's Recollection. *Tex Heart Inst J* 30(1):8-12, 2003.

1945 December 28: American novelist Theodore Dreiser dies at age 74 in Hollywood, California. Dreiser's best known works are probably his novels *Sister Carrie* and *An American Tragedy*. In February 1915 Dreiser published in *Smart Set* magazine his one-act play "Laughing Gas" in which a physician having surgery has a mystical experience while under nitrous oxide anesthesia. [see Wright AJ. Theodore Dreiser's "Laughing Gas." *Anesth Analg* 69:391-392, 1989] Dreiser was born on August 27, 1871, in Sullivan, Indiana.



Theodore Dreiser c.1910s

2000 December 31: Dr. Hiram Elliot dies in Birmingham, Alabama. A 1938 graduate of the University of Tennessee School of Medicine, Dr. Elliot became one of the earliest physicians in Alabama to devote his practice to anesthesia. In March, 1948, Dr. Elliot, along with Drs. Alice McNeal, Alfred Habeeb and E. Bryce Robinson, Jr., founded the Alabama State Society of Anesthesiologists. In 1973 Dr. Elliot founded the Anesthesiology Department at Brookwood Hospital and practiced there until his retirement in 1991. An obituary for Dr. Elliot was published in the *Birmingham News* on January 2, 2001. He was born in Mississippi on June 18, 1913.